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# The Check is in the Mail (And so is the House): An Analysis of the Short-Lived Catalog Home Phenomenon

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The Check is in the Mail (And so is the House): An Analysis of the Short-Lived Catalog Home  
Phenomenon

An honors thesis presented to the  
Department of Geography and Planning,  
University at Albany, State University of New York  
In partial fulfillment of the requirements  
For graduation with Honors in Geography and Urban Planning  
And  
Graduation from The Honors College.

Madison Caswell Squires

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## **Abstract**

This thesis seeks to examine the concept of mail-order, “kit” housing, as pioneered at the beginning of the 20<sup>th</sup> century. Of primary focus will be the (then) new technologies and innovations having made this industry possible, as well as the marketing methods used in the concept’s advertisement. Further parallels between mail-order housing and other relevant historical topics are also to be drawn. Sources include both an original catalog of mail-order homes formerly available from the Aladdin Company, and a reprint of one such catalog published for Sears, Roebuck and Company. Articles from academic journals, portions of pertinent books, and other such written sources are utilized, as well. Other information and context is derived from both recent informal discussions with construction experts, as well as recollections of conversations with elderly relatives having experienced much of the historical context relevant to the era primarily associated with kit homes. The work is concluded with an analysis and critique of recent uses of pseudo-catalog house concepts in construction, and suggestions for theoretical improvements in the design and use of modern kit homes in the present and future.

## Acknowledgments

In early 2015, I still had not yet developed a topic for this Honors College thesis. My spring recess that year was mostly spent at home alone with my brother, since our parents were out of town (a very rare occurrence, indeed). This being the case, my Aunt Pam and Uncle Joe Driscoll, just down the road, invited us over for dinner one of those nights, probably (and rightfully) assuming that we could really use a good meal. My parents usually do most of the cooking, so my food-options at home were pretty limited. This is not because I don't know how or don't like to cook, but because I absolutely abhor hand-washing dishes, and our dish washer has been broken since the 1990s. But this is beside the point. Anyway, my brother had to work that night, so I went to my relatives' house alone, where I was treated to a delicious dinner. I believe it was baked ziti, with bread on the side. At the dinner table during the meal (possibly with the enormous dog Noah lying on my feet, keeping them warm), I mentioned that I still did not have a topic for my Honors thesis. It was Uncle Joe and Aunt Pam who first suggested to me that I do something on kit houses, like those once sold by Sears. I thought this an excellent idea, and from that point onward, my thesis was on mail-order kit houses (for better or for worse). Thus, I must thank my Aunt Pam and Uncle Joe (who did indeed send me home with ziti for my brother on that night) for giving me the topic for my thesis. Without their input, this project would have almost certainly been a different topic entirely.

I absolutely also must thank my thesis advisor, Professor John Pipkin, for going so far out of his way to help me complete this project. He always made himself readily available to give the massive amounts of guidance and help that I was constantly needing, regardless of how busy he was at that moment in his own life. I cannot express how thankful I am for his patience with me and my continued work on this thesis long after graduation day.

I also must also thank Professor Jeffrey Haugaard, former Dean of the Honors College, not only for the great, insightful education which I was able to gain through this program, but for my being accepted into it in the first place... twice. I learned a lot under him, and will always appreciate his giving me a chance.

Special thanks also to Professor Leslie Halpern, for helping me figure out what I needed to do to graduate from the Honors College during her short tenure as its Dean.

I am grateful to Dean Hui-Ching Chang, current Dean of the Honors College, for her patience in still accepting my thesis in spite of its delayed submission and the fact that I have yet to personally meet her.

Of course, I need to thank Mike Connor of Connor Homes for taking the time to talk to me about his business on the phone during the spring of 2016. His insight provided me with a massive amount of valuable information.

During the summer of 2016, I mentioned how I was working on this thesis to my neighbor and friend George Forgette. After coming home from work a short time later, I was informed by my mother that George had telephoned for me and might have a catalog related to my research. I went to his house, where he informed me that he had told his wife, Nancy, about my project. Nancy remembered that one of her relatives had once constructed an Aladdin house kit, and that she had an original Aladdin catalog (in which the house had been advertised) and its associated

price sheet in her possession. Knowing that I would be very interested in it, they showed me the book. I initially figured that they were going to let me borrow it for my research. However, George and Nancy insisted that I keep the book for myself, due to my love of architecture, the topic itself, and old things in general. This gesture really meant a lot to me, and though George and Nancy asserted that they wouldn't be offended if I didn't end up using any of the book's information in my actual thesis, the document's content was far too fascinating and useful to ignore. I thus ended up using it quite extensively in the paper, both for information, and images. All of the Aladdin illustrations in the attached Appendix are photographs that I took of this catalog's pages. Furthermore, the catalog itself and its price sheet can be seen in Figures 8-A and 8-B. I will forever be grateful to Nancy and George for the thoughtful gift of this very well-preserved Aladdin catalog, which is now one of my most prized possessions.

I must thank my parents for playing their part in the undertaking of this project. Not only did they put up with my general levels of stress and inability to complete this work until after graduation, but also allowed me to "take over" part of the family basement as my personal work station so I could actually finish. Also, my father has instilled in me a lot of construction-related knowledge through the years, much of which ended up getting used in this thesis.

The disassembled sliding doors and associated piece of track pictured in the Appendix were photographed inside of and directly outside of, respectively, a barn belonging to my cousin Ron Hamm. Here I wish to thank Ron for allowing me to capture and use said images within this project. My Montgomery Ward garden tractor, also pictured, is seen as being stored within this same barn (as it currently remains, coincidentally right next to the aforementioned sliding doors). Here I must also thank Ron for giving me this awesome tractor in the first place, and then allowing me to store it in his barn for so long since then (as I have yet to find enough room in my own barn to properly house it). Furthermore, here I should also thank Ron for allowing me to store my Ferguson tractor in his other barn for a while, as well as letting other members of my family utilize your outbuildings for storage. Like my mom's piano. And my dad's stuff. And my grandma's stuff. And... well, you get the picture.

Several images within this Appendix (those of the ironing board, the breakfast nook, and the Dutch benches and table) are photographs taken from the interior of the home of Pam Bonesteel. I must thank her for having been so accommodating in the spring of 2016 when I asked to take a plethora of photographs of her beautiful home for use in this project. She even provided me with an antique flat iron to use as a prop in the ironing board pictures.

My grandfather, Ralph S. Squires, and uncle, John W. Hamm, both taught me much about the past through their recollections of their own lives. I am grateful to have been able to use some of that valuable information in this work. Rest in Peace.

Nick Lang, my friend since my first day at the University at Albany, has always been there for me, and I doubt that I could have graduated from the Honors College without him. For two years, Nick was a fantastic roommate. After that, though we lived separately, he always made himself available to help me, whether it be through advice, or something as simple as giving me a ride, or even just getting me to have some fun. Having burritos after "The Search for Life Beyond Earth" class in the (now gutted) Campus Center courtyard is definitely one of my best memories of college.

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## **Introduction:**

Today, few without an interest in historical architecture realize that at the dawn of the 20<sup>th</sup> century, a new strategy of affordable building construction came into (relatively) widespread use, one which utilized many of the mass production principles used in automobile manufacture (Ebong, 2005; Hunter, 2012). Entire, totally disassembled homes could be ordered through the mail, straight from the producer. Each and every framing member was precut to fit into its permanent installation location, and labelled, corresponding to a provided assembly manual (Ebong, 2005; Hunter, 2012).

Catalog houses constructed in this particular method (being ordered in disassembled, precut, and labelled pieces matched to an instruction book) were generically known as “kit” homes, regardless of brand of manufacture (Ebong, 2005; Hunter, 2012, 5, 6). These components were generally shipped to local railroad depots by locomotive, after which the buyer would transport said materials to their final destination (Hunter, 2012). For the sake of simplicity (and indeed, historical accuracy), only these specific mail-order construction formats (of which there were many, also to be discussed at length) shall be known as true “kits” within the scope of this thesis (Hunter, 2012, 6-7). The term “catalog homes”, on the other hand, will be used here to refer to any house (or other building) -variant which could be purchased through the mail and assembled with instructions (whether it be an actual, “true” kit, a panelized modular building, or anything else) (Hunter, 2012; Sears, 1926).

Nor is the use of the “kit” term to be associated with sub-standard quality, because at least until World War II, most, if not all, of these homes were built on the same structural principles, and just as well as (if not better than), the general construction-standards of the time (Connor, 2016; G. Squires; Sears, 1926). In fact, for a while it indeed seemed that kit-type building was to

become the new construction standard, with the “stick” built home predicted to soon take over the “odd duck” position of obscurity held by those precut in factories (Connor, 2016; Hunter, 2012). However, this prediction never even came close to fruition, with kit based construction making up an approximation of only 3 percent of the total new homes being erected by the time the 1920s were halfway through (by far, the phenomenon’s peak era) (Connor, 2016; Hunter, 2012).

However, the fading popularity of kit-construction could not possibly have failed due to a “lack of trying”. New technologies made for efficient processing-methods, affordability, and creative, persistent marketing, all of which played a part in the development of the mail order construction industry (Connor, 2016; Hunter, 2012; Pipkin, 2016; Sears, 1926). Furthermore, there remains to be hope for the survival of (at the very least) some of the principles and ideas behind the “original” kit homes through the activities of smaller, local construction establishments (Connor, 2016; Connor Homes; *This Old House* 35.17).

The invention and popularity of kit homes in North America at the beginning of the twentieth century is an interesting, niche facet of the region’s architectural history. One could also say that this industry was indeed a product of the times, having utilized various technologies, trends, and media which had just recently come about.

The goal here is to examine how, exactly such modern technologies, trends, and techniques were used in the kit-building industry, within the historical context of the era. This is to be accomplished through the analysis of a re-print of an original Sears house catalog, various publications by experts on the subject of classic-era kit-building, and other relevant topics. Late in the development of this work, an actual, original printing of an Aladdin Company catalog was acquired only through a combination of the generosity of a neighbor and pure coincidence. Of



course, this too is also examined extensively as an important information source. Also to be utilized in the answering of these questions are recollections of relevant narratives of family and friends, as well as a very informal phone conversation with the head of a contemporary modular (but not true “kit”) home company. This research is to be concluded with a discussion of the possible future of the kit and other non-stick built construction industries.

### **Literature Review:**

Much has been written by academics about the kit house-movement’s influences on society. The notability of the popular architectural trends which they reflected, the uniqueness of the kit house system (in its most generic sense), and other applicable factors have all been examined extensively. Other-such topics have been covered, as well. A defense of the study of popular culture in academia (using a unique kit house as an example of the field’s importance), a study of the kit house industry’s effects on the monotony of suburban landscapes, and an analysis of house plan catalogs’ promotion of suburban heterogeneity are all summarized below (Draeger, 2001; Garvin, 1981; Schuck, 2013).

One particularly interesting article was written by Schuck for the August, 2013 issue of the *Journal of Popular Culture*. Here, in the wake of the demolition of the former “Popular Culture House” (which had previously housed Bowling Green State University’s Popular Culture Department), Schuck stresses that the building itself had been an ultimate symbol of the concept of “popular culture”, since it was generally known to have been a Montgomery Ward catalog-home (Schuck, 2013, 701). As such, this building would have had historical value beyond its connection to the University. Prior to the building’s demise, however, it was discovered that no home matching the design of the Popular Culture House had ever been offered by Montgomery Ward. However, the Sears “Lewiston” model was found to have had the same design as the

House, despite the fact that the markings on its structural members clearly pointed to said building having come from the former (Schuck, 2013, 702). It was hypothesized, therefore, that the building had been contracted through Montgomery Ward as an exact replica of Sears' Lewiston house. These odd circumstances lent the building even further historical importance, making it an incredible rarity (and also its razing that much more heinous). Schuck closes with the argument that popular culture is a legitimate topic of academic interest, since the archival preservation of its elements allows for their analysis and thus the ability to learn much from them about the society in which they had been entrenched. Bowling Green University's Popular Culture House not only served as a representation of this line of study, but also as an example of what can be learned from preserved elements of past popular culture.

Architectural historian Draeger has hypothesized that kit house architecture has had an unintended influence on society which one may not find immediately apparent. Draeger, like many others, has noticed that much of the "modern suburban landscape" is characterized by an obvious architectural monotony (Draeger, 2001; Ferraro, 2013; Jacobs, 1961; Pipkin, 2013). Notable about this is the fact that the United States is, on paper, diverse on so many levels (Draeger, 2001). Thus theoretically, its building styles should be just as diverse. This is not really the case, though. In seeking to answer the question of why this is, Draeger asserts that the rise of kit houses, as well as other 20<sup>th</sup>-century building methods, in part helped bring about the pseudo-standardization of much of American architecture. As such, the standardized industrial production of nails and lumber also played a part in this, as did the publication of building-plan books. The changes brought about by these factors occurred on a national (rather than local or regional) scale, with the result being a "broader building tradition": whatever became popular at one moment in time would likely soon have recognition around the country (Draeger, 2001, 33).

According to Draeger, the ideas behind the standard house plans semi-pioneered by kit house manufacturers would soon evolve into a universal, American building-vernacular, in the stead of architectural styles and knowledge only being developed locally by building professionals with little influence from outside sources.

In another work, Garvin observes that the architecture erected in America's suburbs has exhibited a remarkable variety of new styles being adopted over a notably short period of time (ironically, in contrast to Draeger's aforementioned findings) (Garvin, 1981). This was a surprising deviation from the norm, whereby architects tended to work on an individualized basis with clients, personally seeing to the proper assembly of individual homes (something which would have previously been impossible on such a large scale of construction). The answer to how this was accomplished, according to Garvin, was through the relatively new medium of mail-order house plan-books. Really, these were just catalogs advertising different house-plans that a person could buy from a particular vendor. The goal of the creators of these catalogs was to profit from selling the plans being advertised, rather than the catalogs themselves. These publications had more or less evolved from "architectural pattern books", which were only meant to showcase certain architectural-styles and entuse builders into taking them up. Unlike the makers of building plan-catalogs, those of pattern books weren't trying to sell anything, beyond the book itself (though said publications did often advise those hoping to build a house to patronize the works' authors) (Garvin, 1981, 309; Hunter, 2012). It is important here to note that the production of catalogs of mail order house plans would go on to be an important step in the evolution of the kit house concept later on (to be discussed below) (Garvin, 1981; Hunter, 2012).

## **History of the Concept:**

The few who are indeed familiar with kit-based construction methods will generally associate such practices with Sears, Roebuck and Company (Hunter, 2012). Though generally regarded as the best-known provider of these homes, they certainly did not last as long in the market as some others, nor did they ever sell the greatest overall number of units (though they may indeed have sold at the highest rate for a decade or two). Due to this notoriety, existing catalog homes (manufactured by any company) are often generically (or mistakenly) labelled “as ‘Sears’ homes” (Hunter, 2012, 25). For this reason, (and a few others), one could argue that Sears produced the “Winnebago” of catalog homes (Hunter, 2012; Winnebago, 2016). Just as most any motor home/recreational vehicle (RV) is often generically (or, once more, mistakenly) referred to as a “Winnebago” regardless of the actual maker, most any kit home can be frequently mislabeled as a “Sears”. In reality, there were many sellers of catalog homes during the heyday of this practice, just as there has always been a huge variety of brands selling campers, “travel-trailers”, and the like.

I feel the need to note here that this comparison between kit homes and motor homes, travel trailers, etc. is only intended to draw likenesses between company origins and brand-recognition. Though both types of products were meant to house people, their overall missions were totally different: one was meant to be a permanent home, the other a portable, “adventure” abode (Ebong, 2005). Recreational vehicles needed to be light in order to maintain portability, and as such aren’t as sturdy as actual houses (G. Squires). Kit homes, on the other hand, being meant for permanent stationarity, are generally just as sturdy (if not sturdier) than regular houses (Aladdin, 1920; Connor, 2016; Hunter, 2012; Sears, 1926). I cannot over-stress the fact that “kit” here does not imply a loss of quality.

Even in 1920, the Aladdin Company seems to have been aware of this negative association of kit homes with mobile homes or other forms of temporary, “portable” housing (Aladdin, 1920, 6; Connor, 2016; Ebong, 2005). After drawing supposed parallels between facets of the company’s kit-construction techniques and those used in the building of the Biblical King Solomon’s temple, the Washington Monument, and other grand structures, the claim that “The pyramids aren’t portable, the Woolworth Building is not portable, *nor are Aladdin* houses portable”, is made (Aladdin, 1920, 6). This is followed by a statement claiming that the construction of Aladdin kit houses is identical to (and thus just as good as), that of any other “first class frame dwelling” (Aladdin, 1920, 6).

Also like the products of Winnebago Industries and their connection to motor homes, the initial offerings of Sears, Roebuck and Company differed quite significantly from the business’s inherent association with kit homes (Hunter, 2012; Winnebago, 2016). Initially, the company that would become Winnebago Industries only built “travel trailers” (campers meant to be towed by another vehicle), rather than the self-propelled, “drivable” motor homes which the company is now so heavily-associated with. It wasn’t until eight years after production commenced that Winnebago actually started making any actual *motor* homes, at all.

Similarly, Richard Warren Sears started out as a train station-worker, who in 1886 got a good deal in purchasing a rejected rail shipment of perfectly-good watches (Hunter, 2012). He then managed to sell them for profit. Despite having no experience in repairing or building watches, he soon founded the R. W. Sears Watch Company. Shortly thereafter, Sears hired watch-expert Alvah Curtis Roebuck to help make up for these technical shortcomings, renaming the business “Sears, Roebuck and Company” (Hunter, 2012, 15). This new business would soon join other fledgling firms (such as that which would become Montgomery Ward) in vending a variety of

catalog-based goods, eventually offering entire houses as products. In this way, Sears went from selling watches to its iconic (at least within some circles) house-kits, comparably to how Winnebago Industries started off exclusively selling trailers, only to eventually fully transition to making nothing but their much more well-known motor homes (though Winnebago *did* eventually return to building both kinds of campers) (Hunter, 2012; Winnebago, 2016).

But how did the basic concept of kit homes start? What were the primary companies which offered them in the United States? Eight different firms offered mail-order, catalog homes over large portions of the country (Hunter, 2012). Many smaller, local purveyors also existed, but these are beyond the scope of this project. None but two of said larger companies provided catalog homes of any kind from their inception (though most had, at the very least, dealt with construction materials at some previous point).

The first exception to this rule happened to be the first of these to even offer kit homes: the business which would become the Aladdin Company (Hunter, 2012). In 1906, Aladdin's cofounder, William Sovereign, saw plans for a boat that was meant to be sold in a pre-cut kit. Feeling that this concept might also be well-suited for an entire building, Sovereign drew up his own design for a boat-*house* (ironically enough). Deeming the undertaking a success, William partnered with sibling Otto to incept the kit home manufacturer known as the "North American Construction Company" (Hunter, 2012, 19). In order to provide and cut the necessary materials for their offerings, the Michigan-based firm (renamed the "Aladdin Company" in 1913), partnered with first one sawmill, and then another (Hunter, 2012, 19). Both mills had insisted on receiving a portion of the rights to the Sovereigns' company after a point, prompting the brothers to terminate their relationships with outside mills, and instead establish their own. Having seen the profitability of the catalog house business, both sawmills formerly subcontracted by Aladdin

went on to create their own catalog house companies, “Lewis”/ “Liberty Homes” and “Sterling”, respectively (Hunter, 2012).

The other company having sold catalog homes from its inception was Pacific Homes (Hunter, 2012). Founded in 1908 under the name “Pacific Portable Construction Company”, the firm’s original products actually deviated from the true kit house formula of nearly everything being processed and then delivered as totally-disassembled components, pre-cut and ready to be built. All of the homes which Pacific made up until 1918 were instead constructed in a sectional fashion, in which large chunks of walls and other members would be pre-assembled, and these pieces then connected and finished off on the building-site (Hunter, 2012; Sears, 1926). From 1918 until the company left the housing business, Pacific Homes had transitioned to offering true kit homes.

### **History: From Mail-Order Blueprints to Mail-Order Houses**

Anyone who has ever set out to hire an architect to design a house, or worked on a town planning-board (and is thus familiar with such things) will know that carrying out the former can be an expensive and tedious process (Ferraro, 2013; G. Squires; Hunter, 2012). In a sort of prelude to the heyday of kit-building, various successful architects started distributing catalogs advertising their own house-plans to potential buyers. Consumers could browse through these publications, and purchase whatever blueprints they found appealing through the mail. Obtaining blueprints through these means were much more affordable than actually hiring an architect to draw up custom plans meeting the buyer’s needs. The aforementioned ideas (and arguably, new *technology*) behind the mass production of blueprints, as well as the catalog-based marketing employed in their advertisement, drastically changed the way that homes were able to be commissioned at this time (Hunter, 2012; Pipkin). Since the blueprints being purchased under

these circumstances had already been conceived, and were made widely available to anyone who could pay for them, buyers were able to save significant sums of money, while the architect likely still made a good profit.

Seeing new advertisement-opportunities in this popular mail-order blueprints trend, independent sellers of the actual, physical construction materials started putting their names on blueprint-exclusive catalogs such as those sold by the Home Builders Company of Chicago (Hunter, 2012). Thus, those browsing through these publications and potentially ordering blueprints would see a certain lumber mill's name on the cover, (hopefully) putting forth the idea in the consumer's mind that, if deciding to build one of the depicted houses, he/she should buy the materials from that particular supplier. Similar techniques were adopted by larger companies like Sears, Roebuck, except that these blueprint-catalogs were more likely to be self-published, rather than just a different firm's designs (presumably used with permission) brandished with the lumber seller's name or logo. The result would have been legitimate Sears, Roebuck plans, or Harris Brothers plans, etc. This would have allowed consumers to buy the house plans and bulk, uncut materials together from a single company (Hunter, 2012). Said formula would eventually evolve into the kit house process already in use by the Sovereigns' Aladdin Company, in which all components were pre-cut, labelled, and provided with appropriate assembly instructions. The Gordon-Van Tine Company, Harris Brothers, Montgomery Ward, and Sears, Roebuck had transitioned from solely offering plans and bulk materials to selling full-fledged, "true" kit homes by 1916, 1916, 1909, and 1915, respectively (Hunter, 2012). It is worth noting, however, that the homes sold by Montgomery Ward had always been physically produced by outside companies (Montgomery Ward houses from the years 1917 through 1931 had actually been built by Gordon-Van Tine), and badge-engineered.



## **History: Earlier, More-Obscure Origins?**

Thus, kit houses, in their generally understood sense, were a phenomenon that started right at the dawn of the 20<sup>th</sup> century. However, the general ideas and practices behind them could actually go back much, much further. According to Mike Connor, President of Connor Homes, the construction of buildings using premanufactured components goes back at least as far as the English colonization of North America. It is well known that the New World contained many desirable resources, including forests for lumber. However, most settlers "...didn't have a lot of skill" in regards to high-quality building construction (Connor, 2016). Because of this, there were actually "...entire timber [house] frames shipped from England to be built" in the Western colonies (Connor, 2016). Practices like this, in which the needed resources for construction (both physical and knowledge-based) were brought together in a central (yet distant) location for processing and test assembly (or at least pre-fitting) before their shipment to the actual intended place of construction, was said to actually be surprisingly common in the English colonies at this time.

It should be noted here that "timber framing" refers to the practice by which a building's structural members were made up of thick, heavy wooden frames held together using "intricately crafted mortis and tenon joints" (Blue Ridge Timberwrights, 2016; Chudacoff, et. al, 2010, 89; G. Squires; Library of Congress, 2014; Ipswich Historical Commission). This is a type of "post-and-beam" construction in which the frame-work itself is completely devoid of nails or other metal components. In place of such fasteners, wooden pegs were driven into joints in order to hold everything together. It is understandable, then, how much practiced skill and experience was necessary in the construction of a traditional, timber-framed building.

Later on, when greater numbers of skilled home-builders were in the Americas, this practice became less common. However, even during these times, many of the homes constructed for wealthier individuals were still being manufactured (in the aforementioned, kit-like fashion) in England (Connor, 2016). Meanwhile, skilled New England carpenters were paid to pre-assemble house frames, the components of which were then shipped to the West Indies for construction. (One might appreciate the irony here: First, premanufactured frames came to North America from England, but later on, *New* England was selling its own pseudo-kit timber frames to people in other, faraway lands.) Based on this information, one can conclude that (versions of) kit houses started being built long before their generally-acknowledged early 20<sup>th</sup> century “Golden Age” (Connor, 2016; Hunter, 2012). Ironically, Connor has recently discovered that, shortly after the arrival of the Mayflower, two of his ancestors were directly involved in getting one of these homes crafted in England to Massachusetts. Thus, when asked how long his family has worked in construction, he says he can jokingly reply, “400 years” (Connor, 2016).

The difficulty in obtaining further historical information pertaining to the shipment of pre-processed timber frames from England to the New World during early colonial times (in order to verify Connor’s claims) must be acknowledged. I was unable to find virtually anything on that particular subject in this research, beyond the statements of Mr. Connor. This is by no means to say that his claims are inaccurate. They are likely simply an obscure piece of early English and American history, largely forgotten through time, which is yet another parallel to the catalog home industry of the 20<sup>th</sup> century.

What I was indeed able to verify is that traditional, English-style, timber-frame construction was largely the standard in American settlements during the colonial era (Ipswich Historical Commission). Furthermore, according to the United States Department of the Interior, many of

the early, “First Period” houses still standing in certain regions of Eastern Massachusetts can be linked to particular (apparently skilled) carpenters, who in turn could be linked to specific areas in England (Ipswich Historical Commission). This doesn’t necessarily mean that these were carpenters building house-frames in England and then shipping them to North America, though it certainly doesn’t nullify the possibility. What is known for sure, based on various evidence, is that when skilled carpenters emigrated to North America from England, they would build structures much as they did in their homelands, though often adapting them to their new, foreign conditions.

The other bit of information related to the possible shipment of pre-fitted house-frames from Europe able to be retrieved was a single quote by McAlester and McAlester (McAlester and McAlester, 1996). Under a section describing the different known “Wooden Structural Systems” present in American homes, “the Medieval post-and-girt system”, (also known as “timber framing”), is said to be one of the earliest wooden structure-types (besides the horizontal stacking of notched logs) used on the continent [FIGURE 1] (Blue Ridge Timberwrights, 2016; Chudacoff, et al, 2010, 89; McAlester and McAlester, 1996, 34). In a single sentence, this technique is said to have originally been “imported from England and France by the first colonists” (McAlester and McAlester, 1996, 34-36). It is unclear for certain whether this use of the term “import” literally refers to the shipping of the actual house frameworks overseas from Europe to the Americas, or if this is simply meant to convey the fact that the skills and knowledge required to construct post-and-girt systems were brought over as the land was colonized (Connor, 2016; Ipswich Historical Commission; McAlester and McAlester 1996, 34). Given the fact that there is no further elaboration on these possible importations, one might be

obliged to assume the latter, since the former would surely be deserving of further description, regardless of the particular, ultimate subject of the publication at hand.

Regardless of where and when the earliest ideas behind buying homes or partial homes as disassembled kits first appeared, the focus of this work still remains on the mail-order homes of the 20<sup>th</sup> century. Historically speaking, it makes a lot of sense for this concept to have taken off in popularity exactly when it did. Numerous new technologies and trends were successfully being perfected and utilized in the practical world, many of which would ultimately be adapted for use in the grand scheme of the mail-order home business (Aladdin, 1920; Chudacoff et. al, 2010; Hunter, 2012; McAlester and McAlester, 1996; Pipkin; Sears, 1926).

### **Innovations in Commerce and Technology:**

The early 20<sup>th</sup>-century occurrence of the mail-order house industry could never have transpired if it were not for a handful of game-changing innovations and inventions in general commerce, as well as in the construction business (Hunter, 2012; Pipkin). These include the United States' federal "rural free delivery" postal system, the resulting popularity of mail-order publications, and the extensive reach of the country's burgeoning transportation-networks, as well as the increasing use of various mass production techniques in the processing of building materials and the development of "balloon" framing (Chudacoff, et. al, 2010; Hunter, 2012, 15; Pipkin).

### **Catalogs, Mail, and Railroads (A.K.A. "Mail-Roads")**

As previously explained, catalogs advertising mail order house plans (not the materials needed, just the necessary blueprints) were quite popular directly prior to the introduction of true kit homes to the American market (Hunter, 2012). The idea of ordering "general merchandise" through the mail had already been pioneered by people like Aaron Montgomery Ward, whose

first, one-page 1872 “catalog” of mail-order goods apparently met so much success that it had developed into a seventy-four-page publication by 1874 (Hunter, 2012, 15). Others such as Richard Warren Sears would soon take part in this burgeoning new industry.

One of the reasons that the catalog based formula for vending house plans worked so well was due to both the advertised blueprints and the physical catalogs themselves being conveniently received by the buyer directly at their homes through the mail, thanks to the national mail system established in 1896 (Hunter, 2012). As was the case with vendors of mail order general merchandise, these blueprint-sellers were encouraged to utilize this system due to the fact that such catalogs were subject to federal discounts in shipping costs. Furthermore, the new, extensive postal system allowed potential buyers to receive literature (and then the desired products(s) advertised within) from even faraway distributors, thanks to the country’s now-massive system of railways. Which is precisely why Sears relocated his company from Minneapolis, Minnesota to Chicago, Illinois in 1887: the latter city had better railroad access.

Once actual, physical mail-order homes and other buildings started to be sold, naturally they were shipped via railroad mail (Hunter, 2012). In a time before the common use of automobiles and trucks, this was obviously the best option, greatly reducing shipping-time in comparison to that which would have been required of horses and/or oxen, and minimizing the actual need to put strain on these animals. Under these circumstances, such animals would only have been used to transfer the building materials from the closest railyard (or kit house factory) to the intended construction site. Of course, motor vehicles would later take up this role.

In fact, without these many railroads, the kit home-movement that evolved from the original mail-order blueprints could likely never have existed on any larger than local scale (Hunter, 2012). The bulk of kit homes tending to have been built relatively proximate to railroads is a

testament to the fact that these systems were used so extensively in their shipping. Furthermore, rail-lines no doubt helped catalog house manufacturers extend their reach to national or nearly-national levels (Aladdin, 1920; Hunter, 2012; Sears, 1926). There is no way that Aladdin could have simultaneously maintained offices and factories in Bay City, Michigan (the organization's home base); Wilmington, North Carolina; Hattiesburg, Mississippi; and Portland, Oregon (as well as one complex in Toronto, Ontario, Canada), each of which was assigned to serve multiple states/provinces, without the aid of such advanced transportation systems.

Railroads were further utilized by companies like Sears as aids in the compartmentalization of the production of its different kit house components (Lewis, 2015; Sears, 1926). Different construction-elements were often built at different factories in different locations, before being bundled together and shipped as a single unit (Hunter, 2012; Sears, 1926). For example, Sears had an Ohio factory devoted to making just the window-sashes and doors, a plant producing various lumber-types in New Jersey, and yet another lumber factory in Illinois. The pieces for the company's wooden and steel garage-kits (to be discussed later on) were produced in two different plants: the wooden outbuildings were produced in New Jersey, while the metal ones came from Ohio.

### **Innovations: Construction Technology**

The technological innovations most important to the making of the early 20<sup>th</sup>-century kit house phenomenon possible were those directly related to construction techniques and the associated industry (Aladdin, 1920; Chudacoff et. al, 2010; Hunter, 2012; Pipkin; Sears, 1926). Most notable here is the actual way in which structures had begun to be physically-erected. Between the 1700s and mid-1800s, the (literal) fundamental framework of houses and other structures slowly evolved and underwent a "sea change" in common building-technique (Chudacoff, et. al,

2010; Blue Ridge Timberwrights; McAlester and McAlester, 1996). The aforementioned standard system of heavy timber framing, in which heavy posts and beams were held together using nothing but complex mortis and tenon joints with wooden fasteners driven through began to slowly become abridged and adjusted by tradesman to make use of newly widely-available, processed materials.

By the start of the 1800s, a new (one could say, “hybrid”) framing-strategy, known as “braced frame” construction, had largely become the standard [FIGURE 1] (McAlester and McAlester, 1996, 36). This system utilized both the traditional, heavy corner-posts connected by sturdy perimeter girts via “mortis and tenon joints”, simultaneously with weight-distributing vertical studs made of actual milled lumber (Chudacoff, et. al, 2010, 89; McAlester and McAlester, 1996). These studs replaced the additional, load bearing posts and girts which would have been spread along the length of the building under the previous standard. This change in strategy was driven by the growing availability of milled lumber and “inexpensive wire nails”, used to spike the processed studs into place (McAlester, et. al, 1996, 36).

Using nails instead of skillfully crafted joints and dowels, of course, made basic construction tasks significantly faster and easier (Chudacoff et. al, 2010; McAlester and McAlester, 1996; Pipkin, 2013, 2016). Rather than needing to have someone who *really* knew what they were doing spend a ton of time and significant effort individually carving and fitting each and every point where two or more structural beams needed to be connected, one could just have any person of average ability slapping nails into upright studs. But this wasn’t possible (at least, for the general populace) until relatively standard-sized, milled lumber and nails were cheap and plentiful.

The affordable, mass-produced nails in themselves were an exceedingly revolutionary piece of this formula, since in previous times, they had to have been made by hand, resulting in their being prohibitively expensive (McAlester and McAlester, 1996; Pipkin, 2013, 2016). A skilled blacksmith would have needed to painstakingly stretch and pinch the metal for each and every single nail, individually (Pipkin, 2015, 2016). Naturally, no two nails would have been exactly alike, and their rate of production quite slow. The mass production of these fasteners not only made them readily available and affordable, but also generally consistent from nail to nail.

Due to its combination of post-and-girt corner and horizontal members with supporting, processed-lumber vertical studs nailed into place, and the use of load-bearing interior walls, braced frame-construction can be seen as a metaphorical “stepping stone” between the Medieval heavy, mortised timber framing, and the upcoming, semi-modern “balloon” framing (Chudacoff, et. al, 2010, 89; McAlester and McAlester, 1996; Pipkin, 2013, 2016).

### **“I’d Sure Hate to Burst Your *Balloon*, but...”**

Braced framing held its place as the industry standard of sorts for construction in much of North America up until the 1860s, when the general concept of framing underwent yet another change. Invented sometime in 1830s Chicago, the new construction system known as balloon framing soon rose to prominence, though braced frames were still commonly constructed in the eastern states up through the 1900s (McAlester and McAlester, 1996).

Under the system of balloon framing, *all* of a building’s skeleton is made up of processed, milled planks of standardized measurement, almost always of two-inch thickness (generally, two-by-fours or less-commonly, two-by-sixes) [FIGURE 1] (Blue Ridge Timberwrights, 2016; Chudacoff, et. al, 2010; G. Squires; McAlester and McAlester, 1996). Primary frame pieces,



such as corner posts and top plates (which need to be extra-strong and rigid), are made of multiple planks layered and bound with nails, making up a single, “laminated” unit (Belden, 2006-2007, 2007-2008; McAlester and McAlester, 1996). The heavy, wooden beams characteristic of post and girt and braced frame construction are absent, as are any hewn and pegged bindings. Laminated beams and nails instead take their place. As in braced framing, much of the load-bearing strength of a balloon framed structure comes from the regularly-distributed, frequent, vertical two-by studs nailed into place (in both interior and exterior walls) (McAlester and McAlester, 1996).

The above characteristics of balloon framing result in construction which is faster, easier, and cheaper than the previous methods, thanks in part to the fact that absolutely no skilled labor is needed to carve beam joinery (McAlester and McAlester, 1996). Naturally, this resulted in a housing “boom” by the turn of the century, and due to more homes being built and said homes being relatively affordable, home ownership came into reach for many of the working class who wouldn’t have been able to purchase one previously (Chudacoff, et. al, 2010; Pipkin, 2013, 2016).

There are several characteristics of balloon framing which fundamentally separate it from other two-by based architecture (Chudacoff, et. al, 2010; G. Squires; McAlester and McAlester, 1996; Pipkin, 2013, 2016). It is easiest to explain this through a summary of the process of actually putting one of these structures up. In a balloon framed building, prior to the installation of any uprights, a foundation would be laid, with a wooden mounting plate on top, running the perimeter of said foundation. To this plate, the upright, two-by-four studs would be affixed. It is the nature of these studs, and the way in which the building’s floors are mounted, which primarily defines a balloon framed building as such. Uniquely, each of these stud boards runs the

entire height of a building's walls, from the bottom, foundation sill-plate, all the way through the gables and to the top-plate, to which the roof is affixed, with absolutely no breaks in between. Each stud is, essentially, the height of the building, relative to its placement within. The floor joists are affixed to braces attached at the appropriate height to the inner side of said continuous studs. It doesn't matter how many stories are involved in a particular building. If it is truly balloon framed, then the studs will run its entire height without interruption.

Though balloon framing (and the relatively new technologies making it possible) made it vastly faster and easier to erect structures around the turn of the century, years of history (and the knowledge and experience dispensed by those having lived through said history) have illuminated multiple flaws resultant from this construction-system (Blue Ridge Timberwrights; Chudacoff, et. al, 2010; Ferraro, 2013; G. Squires; McAlester and McAlester, 1996; Pipkin, 2013; Sears, 1926).

The most-dire of these concerns was likely not at all obvious to builders during the "golden age" of balloon framing. Due to the nature of the practice itself, a completed building would have hollow, vertical shafts running continuously from its foundation to its roof (in between the aforementioned, continuous studs) (G. Squires). And herein lies the problem: these large, air-filled voids allowed fires to quickly spread between levels of the building (Bryson, 2007-2008; 2009-2010; Ferraro, 2013; G. Squires; Renner, 2006-2007, 2010-2011). If a fire was sparked within a first floor wall, said conflagration would soon have grown and spread, unimpeded, up past the second floor (assuming a multiple-storied house), all the way to the roof. In this way, the burning of a building would be greatly accelerated, reducing the occupants' ability to escape, as well as the chances of extinguishing the fire to save the building itself. This is a problem well known to those who have restored or otherwise worked on balloon-framed buildings, who often

install various fire-resistance measures when doing so. “Fire-stops”, solid cross-pieces used to divide continuous wall voids into separate cavities (one per floor) in multiple story, balloon framed buildings, as well as fireproof insulation, are often added when construction or restoration work is being done on such structures, negating a fire’s ability to quickly traverse the height of a wall (G. Squires).

The other quirk related to balloon framing is attached to the nature of processed lumber itself. One will find that structural members (such as two-by-fours), are often less than perfect by default (“standardized” though they may be): they can be full of warps, bends, and (worst of all), twists (Blue Ridge Timberwrights, 2016; Chudacoff, et. al, 2010; G. Squires; Pipkin, 2013, 2016). Such imperfections won’t usually make a particular piece of lumber impossible to work with, though they can indeed make one *harder* to properly utilize. Tool-manufacturers even sell various “board-benders” and other such devices to hold imperfect boards straight until they are nailed or screwed into place, whereupon they are more or less effectively “locked” into the proper, straight shape. Of course, it is much easier to find a nearly-straight, shorter board than a nearly-straight, really long one. And since balloon framed structures are dependent on vertical studs that are as long as the building is tall, one can imagine that builders of such edifices may have had to wrangle quite a few two-by-fours, twisted like double-helix DNA strands (a massive exaggeration though it may be), into place. This would slow down construction and, in extreme cases, theoretically result in a building that is not perfectly “square”.

Yet another framing technique (arguably a “modification” of balloon framing) was put into common use by 1930 (Blue Ridge Timberwrights, 2016; Chudacoff, et. al, 2010; G. Squires; McAlester and McAlester, 38). “Platform framing”, as in balloon framing, utilizes a framework consisting of mass produced (generally) two-by-fours held together with also (mass produced)

nails. However, the studs *do not* run continuously from the top of a building's foundation to the base of its roof, nor are floor joists attached directly to said studs. Instead, "...the floors are constructed as independent units, like thin, flat platforms..." [FIGURE 1] (McAlester and McAlester, 1996, 38). The building's walls are built directly on top of these floors, using story height two-by studs. The tops of these wall systems terminate at either the next platform, or the building's roof (such a system can be and is used for many-floored buildings). In this way, platform-constructed buildings are assembled kind of like Oreo cookies, with the platform-floors as the wafers, and the short, vertical wall studs the cream filling. Thus, the wall studs are only the height of single-level rooms, rather than the height of the entire building, and are supported by the floor's framework, rather than the opposite (both of which would be the case in balloon framing).

As one might deduce, platform construction eliminates some of the issues inherent to balloon framing, while simultaneously exhibiting greater strength and less complexity, as well (Blue Ridge Timberwrights; Chudacoff, et. al, 2010; G. Squires; McAlester and McAlester, 1996; Pipkin, 2013). The walls are *not* continuously hollow from foundation-to-roof (due to the platforms themselves essentially acting as functional fire-stops), thus preventing any potential wall fires from quickly traversing floors and spreading throughout the building. Furthermore, the shorter stud-lengths used in platform construction would undoubtedly be much easier to find relatively straight and un-warped than the building-height two-by-fours necessary for balloon framing. Of course, it is much easier for builders to handle shorter lengths of wood than longer ones, to begin with. One can see, then, that platform framing has multiple benefits in its favor.

## The (Literal) Kit House Framework

Since kit housing reached its peak popularity around the turn of the century, many might assume that they had primarily been balloon framed structures (Blue Ridge Timberwrights, 2016; Chudacoff, et. al, 2010; Ebong, 2005; Hunter, 2012; Pipkin, 2013, 2016). However, this does not appear to have *completely* been the case. A cross-section diagram in the 1920 *Aladdin Homes “Built in a Day” Catalog Number 32*, Second Edition, meant to be representative of the structural construction techniques used universally in its offerings, is clearly of platform construction [FIGURE 2] (Aladdin, 1920). Shorter, single story-length studs are clearly used, sandwiched between separate, horizontal floor units, leading to the observer’s irrefutable conclusion that the framework being displayed could in no way be “balloon”-based.

The images in Sears’ 1926 *Honor Bilt Modern Homes* catalog tell a different, less consistent story, however. One page in this publication features two illustrated construction cross-sections, meant to compare the substantiality of Sears’ deluxe, “Honor Bilt” home frameworks to that of its “Standard Built” offerings (Sears, 1926, 13). Clearly, both diagrams showcase platform construction techniques, due to the presence of similar characteristics to those displayed on the aforementioned Aladdin diagram [FIGURE 3]. Also as in the Aladdin diagram, these images seem to serve the purpose of representing the construction style of the framework supposedly utilized by the company in all of its models (Honor Bilt or otherwise) (Sears, 1926).

However, if these diagrams are indeed meant to be universally representative, the 1926 Sears catalog also heavily contradicts itself, because another, earlier set of images tells another tale (Sears, 1926). On the opposing pages 10 and 11, comparable time-lapse images of a house being erected (the one on page 10 “The Honor Bilt Way” (from a Sears kit), and the one on page 11 “The Ordinary Way” (built from scratch)) are displayed in what is claimed to be a format of

“photographic reproductions” (Sears, 10-11). How, exactly, a “photographic reproduction” differs from a re-printed photograph is unclear, though it is notable that these images may very well be the most photo-realistic in the entire catalog. However, the real point here is that the mid-construction images of these homes clearly show that they are actually both *balloon framed*, not platform framed. The clearly-visible, continuous foundation-to-roof studs are a dead giveaway as to the identity of any balloon framed structure [FIGURE 4].

The question, then, is why Sears seems to have been inconsistent in how it framed out its homes, as represented in a single edition of its catalog. And how is it that the older, 1920 Aladdin catalog may have not utilized balloon framing in any of its models, while the newer, 1926 Sears one seems to have still been using this largely-inferior construction system?

This may be partially related to the fact that Sears started to build kit homes during the era of balloon framing’s highest popularity, and terminated its initial attempts at it long after platform construction had become popular. Many companies continued to sell the same, popular house models for extended periods of time, alongside newer additions to their offered lineups (Hunter, 2012). It is thus possible that balloon framed kit houses kept being sold alongside newer models natively constructed via platform framing, long after the former style fell out of favor. Said older, popular models may have never been converted to the newer format simply as a cost saving measure. In such a situation, Sears may have considered platform construction to be the standard (for its *newer* offerings), literally illustrating it as such in its catalogs, while still selling the existing models in the previously-standard balloon framed format (and assuming that the average consumer wouldn’t know the difference). It is also possible that older illustrations from back when balloon framing was this standard were used on pages 10 and 11 of Sears’ 1926 catalog, or

even that the company just used whatever framing methods that the architects of its particular house models preferred.

Concurrent with the rise of two-by-four based construction, this time period also saw the development of mass-produced, pre-assembled windows, moldings, and doors, cutting out the need for builders to specifically know how to assemble those items, too (Chudacoff, et. al, 2010). These components were often pre-assembled or otherwise processed in-house by kit house manufacturers (Aladdin, 1920; Sears, 1926). The availability of off-the-shelf heating systems also minimized the masonry knowledge which a builder would have needed, in all buildings, kit or not: fire-places and stone chimneys were no longer absolute necessities. Such things as these furnaces were also often made by kit-companies like Sears, and were “pushed” to customers in advertising as “extra cost” features (Hunter, 2012; Sears, 1926).

### **The Kit-Based Building Method**

Four primary characteristics of kit based construction in comparison to traditional building methods were consistently stressed in marketing by companies such as Aladdin and Sears, Roebuck. These were cost savings, the reduction of construction time, and an increased ease of assembly of the final products, as well as said products’ overall quality (Aladdin, 1920; Connor, 2016; Hunter, 2012; Sears, 1926). This final point of quality, to be extensively discussed in a later section, will not be expanded upon here. Furthermore, the actual concept of “quality”, unlike the other three (at least, as pertaining specifically to kit-based construction), is obviously not exclusive to kit homes, since structural and material excellence is just as capable of being present in any kind of building.

Of course, the most important aspect of the catalog house phenomenon was the actual method and concept behind such buildings' construction. This was, after all, what made the idea of an actual house kit so unique. As previously asserted, in a "true" kit house, virtually everything was provided by the manufacturer for the construction of a complete, legitimate house (Hunter, 2012). Nearly all was precut, right down to the delicate trim pieces, both interior and exterior (Aladdin, 1920; Hunter, 2012; Sears, 1926). Such structural members as studs, joists, rafters, and stairway-components were generally labelled for identification in connection to the provided construction-book (Hunter, 2012). Virtually the only things *not* provided in a typical Sears or Aladdin kit house were the materials for the foundation and other masonry-work, though Sears still provided the components for basement windows (including frames) and such.

Indeed, the pre-cutting and labelling of major components for the construction of residential building kits really was quite ingenious, with the sensibilities behind it and resulting ease of construction a common theme in kit companies' marketing (Aladdin, 1920; Hunter, 2012; Sears, 1926). Both Sears and Aladdin sought to compare their kit building systems with those of the time's modern steel girder skyscrapers. This connection is made in Sears' 1926 house catalog, through the assertion that the "Ready Cut" format of its homes were inspired by the general process in which these massive architectural marvels were erected (Sears, 1926, 8-9). Such gargantuan buildings were said to be built so quickly and efficiently due to "...careful cutting and fitting of material before it is delivered to the job..." (Sears, 1926, 8). Sears applied the same techniques to the wood used in the assembly of its houses: the builders of which were said to never have to make a single cut for framing or trim-work. On page 8 of the 1926 catalog, an illustration of a large, partially-built steel-framed building is depicted, with a magnifying glass highlighting the fact that the girders of said structure are also labelled, much like the timbers of



the Ready Cut system [FIGURE 5]. According to the catalog, “We [Sears] furnish, already cut and fitted, with your “Honor Bilt” Modern Home all of the material we have found by actual experience and scientific test can be cut more economically by big power-driven machines in our factory than it can be cut by hand on the job”, a process similar to that used in skyscraper construction (Sears, 1926, 8). If this method was indeed more-economical than hand-cutting every piece, then certainly a cost savings should have been expected by the consumer.

Sears, Roebuck and Company goes further in explaining the benefits of its Ready Cut construction system. According to the 1926 catalog, the company conducted the aforementioned test by which a “race” of sorts was set up to see by how much time a Sears precut house kit could be completed ahead of an identical building made out of bulk lumber and guided by traditional blueprints (Hunter, 2012; Sears, 1926). I say here “by *how much* time” the Sears house would be erected before the other, because it would seem to the average person that the contestant with all of the cutting already done, and parts labelled in connection with detailed instructions (presumably with everything properly organized) would be the obvious winner over the rival utilizing none of these benefits (Aladdin, 1920; Hunter, 2012; Sears, 1926). Of course, this contest resulted in the construction of the stick-built house being completed in 583½ hours, compared to that of the Honor Bilt house, at only 352 hours. The benefits of speedy construction go beyond the simple fact that this would allow owners to move into their homes faster, however. Sears explicitly points out that a shorter construction-time means that one would have to pay a per-hour carpenter less to do the complete job. Though this demonstration could have been rigged or faked by Sears for the sake of advertisement, the point is certainly made that under comparable circumstances, a Sears kit house would always be erected faster than an identical house constructed from scratch.

Sears' skyscraper-based arguments were startlingly similar to those which had already been made by the Aladdin Company regarding its own "Readi-Cut (sic) System" six years prior, in its 1920 catalog: "Modern power-driven machines can do BETTER work at a lower cost than hand labor. Then every bit of work that CAN be done by machine SHOULD be so done" (Aladdin, 1920, 3). Just as a skyscraper's girders are precut and labelled in mass production at the factory before reaching the construction-site, so were meant to be the timbers supplied for Aladdin homes. Said catalog even features its own illustration of a partially completed, steel framed structure, with labelled, already fitted pieces ready to be put into place [FIGURE 6].

The reduction of construction waste was also stressed as a part of the cost savings associated with the pseudo-skyscraper building methods utilized by the manufacturers of kit housing (Aladdin, 1920; Sears, 1926). Both Aladdin and Sears sought to prove to the consumer that their systems of pre-cutting almost all of the construction materials going into their kit houses helped to maximize the amount of useable lumber extracted from each tree. The companies claimed that under traditional construction techniques, customers were burdened with having to pay for the wasted scraps of lumber brought about by the inefficiency of poorly planned lumber cuts.

In its 1920 catalog, Aladdin cites a quote from the *Saturday Evening Post* claiming that "Only Thirty-five per cent of the original tree emerges in the form of a building," then goes on to reprint the quote "A safe estimate of good lumber wasted in course of construction is 25%", from the *Retail Lumberman* publication (Aladdin, 1920, 5). Though Aladdin claims these sources to be "unquestionable", it goes on to endorse its own statement, "You will pay for 18% waste when you build the old [non-kit] way", an estimate which it self-labels as "very conservative" (Aladdin, 1920, 5). In order to eliminate this problem, the company claims to have developed its whole construction system around the minimization of waste. This was achieved through several

means. Aladdin claimed to only purchase lengths of wood conforming to the “standard” sizes already needed for the construction of its buildings (Aladdin, 1920). This was supposed to have cut down on the waste (of both time and materials) produced when having to piece together necessary lengths from random log sizes. Aladdin representatives even supposedly worked directly with the lumberjacks supplying the company’s wood to make sure that it was divided into lengths of the organization’s specifications while being harvested. Going hand-in-hand with this is the fact that Aladdin’s homes were designed around standard sizes of lumber, rather than vice-versa, whereupon the wood would have been cut to strange sizes in order to match up with a theoretical house, designed with no thought put into said standard lengths (Aladdin, 1920; Hunter, 2012). This helped to minimize cuts and waste, while easing both manufacture and construction.

The Aladdin Company also tried to maximize the amount of usable wood extracted from each board by cutting it in creative, square area-utilizing ways (Aladdin, 1920). A whole page of its 1920 catalog, titled “TWENTY FEET OF LUMBER FROM A SIXTEEN FOOT BOARD – How it’s done” explains how the organization’s deviation from traditional carpentry methods allows for the maximum utilization of a given piece of material [FIGURE 7] (Aladdin, 1920, 4). A diagram is provided showing how a single, sixteen-foot plank can adequately be used to sheath a theoretical gable eight feet in width, leaving absolutely no leftovers for money to be lost on. Meanwhile, this same depiction also shows how the average carpenter might have used twenty feet of lumber to do the same job, leaving behind four feet of useless waste-material. Of course, any builder who thoroughly planned all of his work out and thought the sheathing-layout through would have been able to do the job with only sixteen feet of wood, though a single person achieving this kind of efficiency, over the course of the construction of an entire house and in a

timely manner, would indeed be quite difficult. So Aladdin's argument for the efficiency of its lumber utilization system isn't so much that traditional carpenters are incapable of minimizing lumber waste, but that it is much easier to do so when using a large scale, industrial process run by many people (Aladdin, 1920; Sears, 1926). Between all of the above innovations in materials-saving techniques, Aladdin claimed to have brought the amounts of waste materials generated per home down to only two percent, a massive decrease in costs for the consumer compared to the aforementioned, traditional alternative of eighteen percent.

Sears also stressed how its minimization of waste allowed for lower prices for buyers of its homes. This was another point brought up in the comparison of the time taken to erect an Honor Bilt kit house verses that required for an identical doppelganger erected traditionally (Sears, 1926). The advertisement repeatedly mentions how the latter structure was erected "...in the old fashioned, wasteful way...", and points out the growing, disheveled pile of scrap wood visible in the pictures of the construction stages of this house (Sears, 1926, 10). While Sears' 1926 catalog never cites lumber scraps as a potential source of wasted money as explicitly as Aladdin's 1920 publication does, the implications are certainly present.

The remaining primary benefit of kit homes over traditionally constructed buildings according to the marketing of catalog house manufacturers, is that these structures were much easier to erect than their counterparts (Aladdin, 1920; Hunter, 2012; Sears, 1926). This fact can be found both implicitly and explicitly in the advertisements of companies like Aladdin and Sears. Both construction rookies and professional contractors were said to appreciate the precut, numbered kit systems (though in reality, many involved in the traditional construction industry actually disliked the concept due to its taking away of potential customers) (Hunter, 2012).

One can deduce that, when a generally-complex job is finished faster than and of equally-superb quality to an identical doppelganger (exactly as was claimed by Sears in its 1921 test), then surely the former had been easier to complete. In conjunction with this, Sears sought to make the comparable effortlessness of building “The Honor Bilt Way” abundantly clear, in saying that, “All our plans are drawn especially for our houses. Even the smallest details are so clearly shown that many people with only ordinary ability have built their own homes, and thus saved the cost of ALL Carpenter Labor” (Sears, 1926, 11).

As “proof” of this, Sears and many other companies published customers’ letters of gratitude explaining how satisfied they were with the quick and easy erection of their catalog homes (Aladdin, 1920; Hunter, 2012; Sears, 1926). Sears’ 1926 catalog even includes several such letters in which satisfied customers explain how they built their own homes nearly single-handedly thanks to the company’s kit system.

In a similar vein, Aladdin’s 1920 catalog contains a subsection entitled “Integrity of the Aladdin Policy” (Aladdin, 1920, 3). Here, the company attempts to convey the honesty of all of the claims made in its advertising (including the ease with which its homes could be assembled), and promises to operate its business on the “Golden Rule” basis (Aladdin, 1920, 3, 9). To potential customers, it offers to supply the contact information of prominent individuals such as Congressmen and other high-tier officials willing to endorse these claims.

But Aladdin made direct assertions as to how easily its homes could be assembled, as well. In its 1920 description of the “Rodney” (a four room home lacking a bathroom), it is claimed that “Two men can erect this house in four days” (Aladdin, 1920, 76). The article then goes on to state that most purchasers of this house indeed go on to assemble it themselves.

Beyond the hype, though, having every single piece of lumber for a house precisely pre-cut and labelled really would make the job a lot easier. Furthermore, Sears and Aladdin truly did mean almost every piece (Aladdin, 1920; Sears, 1926). Trusses, joists, and studs, as well as delicate, decorative trim pieces and moldings were supposedly perfectly mitered, notched, and/or cut for their purposes. From firsthand experience, one may know how difficult and painstaking it is to make a perfect, straight cut, exactly where it needs to be, in an exposed piece of wood whose potential cut-imperfections would surely be seen every single day.

In the final pages of the aforementioned catalog, Aladdin also has a slew of seasonal cottage kits advertised, the lead-in to which claims that “Not the least of the pleasures derived by our customers many times is that of actually erecting the cottage themselves” (Aladdin, 1920, 114). In other words, not only was Aladdin here claiming that the assembly of its cottages was *easy*, but actually *fun*! The company wanted people to set up their vacations in such a way that building these cabins would be a pleasurable activity for the family. This would allow the builders to receive the satisfaction of knowing that they had accomplished this sizable feat and as a result of this, take pride in their new, self-built dwelling. Furthermore, the proud new owners would hopefully appreciate this cottage even more going into the future, having understood all of the work that had gone into it.

Regardless of any exaggeration in marketing, it is known for a fact thanks in part to accounts passed between the generations, that a good number of kit home owners did in fact build said houses themselves (Hunter, 2012). A commonly related theme is that the children of these self-builders were charged with organizing the kit’s numbered components. There is also a Great Depression-era account of the buyer of a single Gordon-Van Tine kit using its components sparingly in such a way as to “stretch” them into providing enough materials for the construction

of two separate houses. Thus, though it is generally agreed that most kit homes were built by hired contractors, a good number were still constructed by their actual owners.

For 1926, Sears prominently displayed testimonials from professional contractors who had had positive experiences constructing their Honor Bilt homes (Hunter, 2012; Sears, 1926). These published comments all generally said the same things: Sears' "Ready Cut" method saves time and money, is easy to use, and results in a high-quality product (Sears, 112). Many of these letters speak of the number of Sears homes erected by these contractors. While Sears obviously wouldn't have published any criticisms or complaints from anyone (contractor or not), there is truth to the fact that some contractors began to specialize in putting kit homes together during this era (Hunter, 2012; Sears, 1926). Indeed, Aladdin (and possibly other manufacturers) began referring customers who wished to hire-out their home's assembly to professionals stationed in specific major cities who specialized in the building of houses from such kits (Hunter, 2012; Sears, 1926). Some contractors are even believed to have built catalog homes numbered in the hundreds.

### **The Kit-Based Building Method: Using Lumber Labels**

Of course, the whole concept of a pre-cut lumber kit would be nearly moot point if the builder (whether a professional carpenter or the future homeowner), didn't have any organized way of separating out whatever specific piece was necessary for a particular step in the process (Aladdin, 1920; Hunter, 2012; Sears, 1926). This is why framing members and other major pieces were labeled, much like the girders of a high rise building, as described above. Different companies had different ways of accomplishing this, in both the form and the placement of these labels, which generally consisted of combinations of letters and numbers encoded in relation to the assembly manual (Hunter, 2012). Sears tended to stamp these characters in ink on the ends

and/or sides towards the ends of its boards, while a handful of other companies inscribed these codes by hand, in central locations. Harris Brothers is the only major company known to have utilized stencils in the labelling of its lumber.

The part-designation labels used in kit homes seem to have defined certain classes of frequently occurring parts, rather than different characters having been used on every specific piece of lumber (a system which wouldn't have made any sense at all on the scale of an entire house) (Aladdin, 1920; Sears, 1926). For example, every ten-foot, upright stud in a home would have been individually labelled, sharing the same part-number. This being said, one must sympathize with those whose job it was to label the precut boards prior to their shipment from the factories (especially those who had to hand write said labels on every single plank).

One must also wonder about the frequency of human error in the making of these labels. Imagine doing nothing but stamping something like "12-0" on planks for three hours straight, before suddenly needing to switch to "12-1" (Hunter, 2012, 13). How long might someone continually put the previous designation on the wrong plank? After figuring out that he/she badly screwed up, possibly unable to fix any such mistake, said person would probably be left wondering how severely he/she had just messed up someone's new house. He/she hopefully would have wished to make things right, though perhaps not knowing exactly how to do so.

Kit home companies, and the idea of mail order homes in general, were commonly under fire from various members of the traditional construction industry due to the fact that they lost business to this new, kit based competition (Hunter, 2012). Such nemeses would insist that catalog houses were inferior to normally-constructed buildings. This was an outright lie, since catalog homes, in the right hands, were built just as soundly – if not better than – the standard for



other homes being erected at the time, and even today in 2016 (Aladdin, 1920; G. Squires; Hunter 2012; Sears, 1926).

Yet there was one concern pushed by opponents of the kit house system relevant to the actual labelling of pieces (Aladdin, 1920). Some claimed that the time spent in seeking out whatever particular, precut piece was needed at any specific step in construction from the massive number of provided pieces would negate any time saved by having had nearly everything precut. However, according to Aladdin, this concern was completely irrelevant, since the instructions for every house sold by said company included the description of a "...simple system of laying out materials..." to be done prior to the start of actual construction, to make the finding of particular planks as simple and easy as possible (Aladdin, 1920, 8). The 1926 Sears catalog also makes the point that their pre-cut lumber pieces can be easily sorted prior to construction, as well, thanks in part to the fact that its smaller components would come bound together in homogeneous, labelled bundles (Sears, 1926).

## **Marketing**

As is still the case today, the marketing campaigns of yesteryear sought to grab peoples' attention, with the ultimate goal of getting them to buy products... the more, the better (Athenaeum/Dover Publisher's Note, 1991; Hunter, 2012; Lewis, 2015). Of course, manufacturers of kit homes were no exception to this rule.

### **Marketing: Catalogs**

The primary way in which kit houses were marketed was through their respective companies' catalogs (Aladdin, 1920; Hunter, 2012). Based on firsthand experience with an original copy of the 1920 *Aladdin Homes "Built in a Day" Catalog Number 32*, Second Edition, one can deduce

that at least some of these were nicely-bound, attractive, hard-cover publications, apparently meant to last. The prices for the homes and other buildings in this book were printed on a loose price sheet, almost certainly so Aladdin could tweak prices at a moment's notice without having to waste money printing slews of new catalogs every time [FIGURES 8-A and 8-B] (Hunter, 2012). Perhaps this was part of the reason why my original Aladdin catalog is so sturdy: maybe it was meant to outlive the kit prices contemporaneous to the time of its original printing? It is actually interesting to find a loose price sheet associated with a 1920 publication, since this was a common cost-cutting measure of kit home manufacturers during the Depression. Maybe Aladdin just used these from the beginning because it makes sense regardless of the state of the economy?

Companies gave every reason to buy their kits, and pandered to seemingly every possible want, need, or concern of the average home-buyer (Athenaeum/Dover Publisher's Note, 1991; Hunter 2012; Sears, 1926). Sears' "Sears Architects' Council" (which I guess helped approve and design the homes?) supposedly contained a female member "who understands the requirements of a housewife", a specificity that was meant to show potential buyers (women in particular), that all of the company's offerings had been well thought out, and set up for convenience (though in a blatantly sexist fashion) (Athenaeum/Dover Publisher's Note; Sears, 1926, 19). Similar sentiments were conveyed in the addition of eye-pleasing illustrations and photographs of house interiors, meant yet again for the female audience, which wasn't expected to be "...interested in construction details" (Hunter, 2012, 41). One would hope that these obviously sexist marketing strategies wouldn't be accepted today, but their existence during the period in question is of no surprise at all.

The first pages of the 1926 Sears house catalog feature other reasons to buy one of their homes, while simultaneously demonstrating how affordable they supposedly were. The book states how Sears' "Easy Payment Plan" can allow "nearly everyone" to finally build and own their own homes (Sears, 1926, 0, 1). Large kit house companies' offerings of financing were often put in place in order to sway potential buyers of other brands into buying their own, "small monthly payment" plan-backed homes (Hunter, 2012, 46). Sears asserted that the average person could, instead of paying rent on a leased home every month, be putting that same amount of cash into monthly payments on his very own, Sears kit house. Those who took Sears' offer would "...in the end, have a beautiful home instead of worthless rent receipts", according to Page 1 of the company's 1926 catalog. The page opposite contains a lifelike illustration of what is apparently a housewife showing her husband one such publication, as a child looks on [FIGURE 9]. A "Glen Falls" Sears kit house can be seen in the background with its palette faded around the edges, as if to suggest that one, or all, of the family members are imagining their future home, right within reach (Sears, 1926, 0, 42). The three of them smile as the husband drops piles of these receipts into a trash basket.

Page 1 also contains several small illustrations and appropriate captions to go with them: "Save Your Rent Money", "Give the Kiddies a Chance", "Get Close to Nature", "Have Real Friends and Neighbors", and "Be Independent in Old Age", all activities, pastimes, or ways of life (supposedly) only accessible when you "Own Your Own Home" [FIGURE 10-A] (Athenaeum/Dover Publisher's Note; Sears, 1926, 1). I guess Sears wasn't too worried about offending anyone with such overt statements that people who rent their abodes either aren't, or don't have, "Real Friends and Neighbors". Nor was it concerned about potentially driving away non-religious customers, due to the catalog's Page 1 statement, "To get the full share of Good

Health, Long Life and Happiness for yourself and the kiddies, to get the most out of life as our Creator intended it should be, A HOME OF YOUR OWN is an absolute necessity”

(Athenaeum/Dover Publisher’s Note; Sears, 1926, 1).

Also of note on this page is the illustration paired with the quote, “Give the Kiddies a Chance” [FIGURE 10-B] (Athenaeum/Dover Publisher’s Note; Sears, 1). It depicts an outdoor scene in which a boy and girl are playing “catch” in the foreground, with the ball in mid-air. A smaller child sits on the ground, apparently playing with a doll. In the background, a man is pushing a (now old-fashioned, but then ordinary) ground-driven, rotary lawnmower. This image is eerily similar to one described in the second-to-last chapter of Ray Bradbury’s 1950 book, *The Martian Chronicles*. The scene in question takes place probably within five years of an apparent nuclear holocaust, in a suburb that was almost completely levelled by an atomic bomb. In this particular neighborhood, there is only one house somehow left standing. One of its exterior walls has several shadow-like images permanently etched into its surface as a result of said bomb. They are described as taking the apparent forms of a boy and a girl tossing a ball between each other, with their hands outstretched and the ball in mid-air; a man pushing a lawnmower; and a woman picking flowers. Minus the woman, the catalog scene and the one described in the novel share a disturbing resemblance. Solely based on this observation, Bradbury, whose *Martian Chronicles* was published in 1950, could arguably have been influenced by the aforementioned 1926 catalog illustration. Of course, this is only conjecture, and it is much more-likely that both Sears, Roebuck and Ray Bradbury were simply trying to portray a very recognizable, stereotypical, and often-used scene of life in the American suburbs: kids playing, while Dad “enjoys” cutting the grass (Bradbury, 1950; Sears, 1926; Pipkin, 2013).

Another subject which seems to be stressed over and over again in the marketing of kit houses (from any brand) is the quality of building materials used (Hunter, 2012). In 1917, the Aladdin Company claimed to be so sure of the superiority of the wood it provided, that it would pay \$1.00 per knot found by a customer in its siding (Aladdin, 1920; Hunter, 2012). According to the United States Department of Labor's website, a dollar in 1917 was actually equivalent to \$18.83 today. Needless to say, that is a lot of money for a small supposed imperfection in a piece of wood. One must wonder how many people, if any, held the Aladdin Company to its word on this guarantee, and whether it actually ever fulfilled said promise. To make such an assurance, Aladdin must have either been very confident in the quality of its siding, believed that people would have been too lazy or unobservant to hold them to their word, or perhaps expected a combination of both of these circumstances.

As previously established, "Customer testimonials" were often employed in mail-order home catalogs as yet another way to convince potential customers of the virtues of buying a particular company's offerings (Hunter, 2012, 44). Sears was one of the heaviest users of this technique, even going as far as producing one particular "...booklet of nothing but testimonials from all over the country, including many photographs of completed homes" (Hunter, 2012, 44). Towards the beginning of its 1926 catalog, two pages are devoted to publicizing letters from customers, labelled as: "...Here are just a few photographs and copies of parts of letters that were taken at random from our huge testimonial files..." (Sears, 1926, 6). Since the following, obviously truncated correspondences of past customers are of universal admiration of the respective products, one can surmise that they were not truly "taken at random", since only the letters of praise ever would have been publicized by these companies (Hunter, 2012). Toward the back of the same 1926 catalog is a set of similar letters from "...reliable contractors who specialize in

constructing “Honor Bilt” high grade modern homes” (Sears, 1926, 112). These contain the same slanted, universal acclaim for the building system, as well as depictions of some of the contractors. One can’t help but notice that all of these builders appear to be white men... but for something from the 1920’s, times even more racist than today, this is of no surprise. Other companies utilized these testimonial opportunities with a bit more economic mindedness, offering to supply them upon request to potential customers either in person at sales offices, or through the mail (Hunter, 2012).

Toward the beginning of Sears’ 1926 catalog, there are two full pages of the aforementioned letters of praise from customers, accompanied by pictures of their finished homes [FIGURE 11]. Since some of these homes actually had their addresses listed right in the catalog, I was curious to see if any of them still existed, and if so, what condition they are presently in. Using Google Maps and its “Street View” function (keeping in mind that address numbers can change and that this program doesn’t always perfectly map exact locations), I was able to make at least one breakthrough [FIGURES 12-A and 12-B] (Google Maps).

### **Marketing: “What’s in a Name?”**

Yet another way the vendors of mail-order homes sought to appeal to buyers was through house-naming schemes (Hunter, 2012). Certain companies, such as Sears and Aladdin, named house models after well-known cities and towns, both domestic and foreign. Some such Sears models applicable to some (relatively) local places include the “Manchester”, “Amsterdam”, and “Glen Falls” (which was possibly meant to be a reference to *Glens Falls*, New York) (Sears, 1926, 3, 42-43, 56-57, 102). Both Sears and Aladdin each had a house named the “Albany”, and Aladdin a “Rochester” model (Aladdin, 1920, 92; Sears, 1926, 3, 70). Supposedly, the method to this

naming-madness was the theory that naming a home model after such municipalities would encourage residents of said places to buy and construct that particular house.

Other place names seem to have simply been references to well-known cities of the world. In hindsight, however, such names can end up being quite regrettable due to negative associations which would not necessarily come to fruition until years later. Aladdin's "Dresden" model (almost certainly a reference to the German city), which was available for at least the year 1920, is a prime example of this. Ironically, Montgomery Ward, too, had a house of the same name, from 1924 to 1928 (Hunter, 2012). Today, Dresden is often associated with Hitler's rise to power, the ensuing atrocities led by the Nazis, and the city's near-total obliteration during World War II. Obviously, no organization would want to associate its products with any of these things. However, when the "Dresden" name was being used by Aladdin and Montgomery Ward in the 1920s, none of these events had yet happened (though perhaps those who were observant and worldly might have predicted their coming), and most Americans would have likely made no negative connections with this city. As such, Aladdin and Montgomery Ward would have easily been able to use this name during the period in which they were utilized. Looking back though, one can see that having named a house model "Dresden" prior to the war would indeed become an unfortunate coincidence. Obviously, no major manufacturer would get away with knowingly linking one of its products with a city related to any of these abominations today.

The Sterling company was known to have used some names that were vague, yet meant to be pleasant. The "Charmcote", comes to mind, here (Hunter, 2012, 43, 44). Yet still different names of other positive associations were also used. The very first home featured in the second edition of Aladdin's 1920 *Catalog Number 32*, was named the "Cadillac", no doubt in reference to the notoriously-opulent automobile brand (Aladdin, 1920, 15). Similarly, the Aladdin homes known

as the “Princeton” and “Yale” seem to have sought positive associations with the similarly-named Ivy league universities (Aladdin, 1920, 48, 53).

Today, Connor Homes uses a clever naming-scheme for most of its home designs, consistent with the business’s mission of producing high-quality reproductions of old houses and styles using above-standard materials, advanced construction methods, and genuinely-built components (such as real wood siding, instead of vinyl- or cement-based components only pretending to be wood) (Connor, 2016; Connor Homes; *This Old House*, 35.17; 35.18). According to Mr. Connor, the homes in his portfolio are given names meant to emulate their old-fashioned character.

Around 90 percent of these were named by his daughters after fictitious people whose names are in turn combinations of his and their mother’s different “family names” (Connor, 2016).

Exemplary of this are the “Thaddeus Welch House”, and the “Hesther Burr House” (Connor, 2016; Connor Homes).

Company names themselves were also known to be built around simple attempts to attract business (Hunter, 2012, 43). Of the eight large, nationwide companies which sold mail order homes in the U.S., by far the most cleverly named was the “Aladdin” Company, after the genie of lore (Hunter, 2012). Until having read about the history of this company, I was relatively unfamiliar with the “Aladdin” myth, though I did indeed associate the name with genies. It turns out that Aladdin was said to be a “...mythical genie who built a castle overnight for his master” (Hunter, 19). Thus, the Sovereign brothers sought to associate their product with the amazing, rapid construction abilities of this genie. Anyone familiar with the Aladdin story would have thus made a connection between the Aladdin Company’s mail-order houses and the implied promise of their swift erection. One thus might find the use of this name in particular to be quite brilliant.



## **Marketing: Sears' Two "Trim Levels"**

Sears kit houses were generally offered in two different quality levels, "Standard Built" and "Honor Bilt" (sic) (Sears, 1926, 12-13). The 1926 Sears house catalog contains many diagrams and component cross-sections illustrating how sturdy each Sears Honor Bilt house is outfitted to be, in comparison to the company's Standard Built homes [FIGURE 3]. Diagrams of windows, walls, floors, and roofs are all provided, expressing how this line of houses is built using materials and methods exceeding general standards. Windows were to be framed out in extra-thick red cypress, supposedly a particularly strong wood for construction (Athenaeum/Dover Publisher's Note; Sears, 1926). Studs and top plates were also double-layered around the windows and doors in Honor Bilt homes, substantially increasing the strength of these orifices. Also of note was the use of "double strength", extra-thick glass (Sears, 1926, 12, 13).

Even my father, who is quite knowledgeable when it comes to construction, was impressed by the thickness of the floors provided for Honor Bilt homes: 15/16 inch-thick hardwood flooring over hefty construction paper, tacked onto a perpendicular-oriented plank subfloor attached to the joists (putting the planks of the finished floor perpendicular to those of the subfloor increases the floor's overall strength, in comparison to a hypothetical scenario where both sets of planks are laid parallel relative to each other) (G. Squires). This is so remarkable even today, since the best case scenario standard specification residential floor thickness is only 1½ inches (¾ inches of hardwood attached to ¾ inches of subfloor). By comparison, the floors of Sears' Standard Built kit homes were merely comprised of the hardwood floor-planks placed directly onto the "tarred felt" tacked over the bare joists.

It is also notable that the aforementioned quality of construction for a Sears kit home (either Honor Bilt or Standard Built) was directly (at least in 1926) attached to the house model

purchased. By this I mean that one couldn't order a particular house, and then specify that it be erected as an Honor Bilt or a Standard Built, the same way one pays extra to get a higher trim level in a specific model of car. A particular model of Sears house was inherently bound to its build quality. For example, the "Rembrandt" could only be obtained as an Honor Bilt, and the "Selby" only with Standard Built construction (Sears, 1926, 30, 115). Of course, the higher quality Honor Bilt homes were always more expensive than their Standard Built counterparts.

This being said, the vast majority of the 1926 Sears Modern Homes catalog is devoted to the marketing of said company's Honor Bilt homes. This makes some sense, since the book's full title is indeed *Honor Bilt Modern Homes*. However, only seven pages of the entire, 144-(marked) page publication are dedicated to Standard Built houses. From the company's perspective, this probably makes sense, since these homes were the most expensive, and thus likely rendered the highest profits per sale (Hunter, 2012; Lewis, 2015). Furthermore, I have never seen a company appear to vilify one of its own products while simultaneously glorifying another as much as Sears does in this particular catalog. The way the Standard Built homes are consistently demonized, both directly and indirectly, all through the book is almost comical. The square area of page representation per type has already been mentioned. Right at the beginning of the catalog, the open-spans of pages 12 and 13 display large, detailed diagrams showcasing the sturdiness, and impeccable quality of materials, used in the construction of Honor Bilt homes. The theoretical cross-sections of Standard Built and Honor Bilt houses are displayed side-by-side, with the latter clearly superior [FIGURE 3]. The Standard Built model looks quite flimsy by comparison, with its having fewer and more widely-spaced studs, joists, and rafters, lack of a subfloor and sheathing, and generally thinner construction materials. Topping this off is the large-font subtitle "Honor Bilt Is the Better Home for You" (Sears, 1926, 113). If I was a

prospective kit house buyer in 1926, I would have completely ruled out even the consideration of purchasing a Sears Standard Built home. I would want to be spending my time and money on something better than the apparent bare minimum building standard. These direct comparison pages are definitely Sears' most-blatant effort to downgrade the status and quality of their own, lower-level offerings.

The remainder of Sears' apparent anti-Standard Built propaganda is subtler. For one thing, the "Standard Built" nameplate is apparently not worthy of getting the snazzy "Bilt" spelling in its title, like its fancier "Honor Bilt" counterparts. Furthermore, the table of contents seeks to make it very clear that there is a big difference between "Honor Bilt Modern Homes" and "Standard Built Low Priced Homes" (Sears, 1926, 3). Does the phrase "Low Priced Homes" not put forth the implication that the Standard Built kits are for those who can only afford cheap, cut-rate offerings, rather than those great, Honor Bilt houses?

It is also worth noting that, of the many testimonials, illustrations, and diagrams praising the virtues of Sears mail order homes in the 1926 catalog, nearly all (if not all) of them are directly linked to the Honor Bilt models. Slogans, such as "Honor Built Homes are Built on Skyscraper Principles: Solid Construction with Less Labor" and "23½ HOURS SAVED BY THE Honor Bilt SYSTEM" seem to only associate Sears' precut and labelled structure-assembly method with their Honor Bilt lineup... when in reality, the same exact process is used in erecting their Standard Built homes (Sears, 1926, 8, 10-11, 113). The difference between the two lineups was related to the quality and layout of materials, and never the actual method of construction, which was exactly the same. Finally, each and every Honor Bilt home model is allotted at least a full page to showcase its features and layout. The plates for all of these proudly feature the words "Honor Bilt" against an attractive Chevron, "written" in fancy, swooping letters. Many of these

are given an additional page's worth of advertising space to showcase either photographs or illustrations of the homes' interiors. This is not the case for the eight Standard Built houses available in 1926. While most are given full-page coverage, two are forced to share a page, and none are given any additional content showcasing interiors. These homes are labelled as being "Standard Built" in a generic, serif font, against a blank background (Sears, 1926, 114-120; Mower, 2014, 2015). Finally, comes what is perhaps the most interesting, Standard Built-downplaying element of the whole 1926 catalog: The page which presents and transitions to the "Standard Built" part of the book is directly faced by one covered in testimonials from contractors praising the quality and methods behind *Honor Bilt* homes! Also featured here are photographs of these men, displaying their own supposed satisfied faces. In comparison to this and the many other pages praising the virtues of Honor Bilt homes, this lead-in page to the featured Standard Built houses is notably bland. There are no illustrations, graphics, or smiling faces. In fact, other than a single decorative "swoop", the page is just text over a plain white background.

Ironically, Sears' attitude in regards to its Standard Built homes would seem a lot more favorable, were one able to look past the above-mentioned subliminal implications. The first page states that "Good Quality Materials" (but apparently not *great*-quality materials) are used in these homes' construction (Sears, 1926, 113). It also explains that all lumber is already precut, apparently just like that which is used for the Honor Bilt series of homes. The claim is also made that one can "Save Nearly One-Half Labor Cost" (presumably over traditional construction) when opting for the Standard Built system (Sears, 1926, 112). These lower-cost homes are actually illustrated quite nicely, and with plenty of detail. Furthermore, the houses themselves are

certainly pleasant and architecturally interesting, though they are all single-story and relatively small (though this isn't necessarily a bad thing).

Just like the Honor Bilt offerings, these homes also feature interesting, pleasant names. The "Hudson" model is likely a reference to the Hudson River (which in turn is its own reference to explorer Henry Hudson), an association which would have made a lot more sense ninety years ago, back before there were any associations of said river with General Electric's toxic PCB dumping (Sears, 1926, 118). Another name with an intriguing possible historical context is the "Grant" (Sears, 1926, 114). This was almost certainly a namesake of Ulysses S. Grant, the Civil War general who would later become President of the United States. It is possible that such a name was given to this relatively small home as a reference to the diminutive Wilton, New York building in which Grant died, now known as the "Grant Cottage" (today, many plaques on the site explain its significance), though the Sears "Grant" looks absolutely nothing like it, and is significantly larger (New York State Parks).

Within the descriptions of the Standard Built homes, value and economy are continuously stressed. For example, it is stated that "While the Grant is not built of the same high grade material as our "Honor Built" Homes, it is of better quality than similar houses offered elsewhere at higher prices" (Sears, 1926, 114). However, regardless of whatever nice things Sears advertises about its Standard Built houses, I personally cannot stop my mind from thinking back to Sears' statement from early in the catalog, "Honor Bilt Is the Better Home for You" (Sears, 1926, 13).

The stressing of the economic value of Sears' lower-grade homes more or less reveals much of the mentality behind the company's insistence on selling two different tiers of housing, and besides that, so many houses of differing shapes, sizes, and amenities. Through the primary

variations in its offerings, the company was probably attempting to appeal to at least three different dichotomies of the population (Pipkin, 2016). These are the wealthy versus the financially disadvantaged; those who live in rural versus suburban or urban areas; and those looking for year-round versus seasonal residences. The Aladdin Company had much the same technique, but made things less complicated by using universal building-grades.

In general, Sears' Standard Built homes (which were, as already established, not only built to lower standards, but also comparatively small), with their cheap prices, were meant to appeal to those in the lower economic ranks. As such, Standard Built abodes were analogous in mission to Aladdin's smallest 1920 offerings (Pipkin, 2016).

Similarly, certain house models offered by both companies seemed more geared toward either country or city settings (Pipkin, 2016). Within both Sears' 1926 Honor Bilt and Standard Built lineups were multiple houses not equipped for bathrooms, as was the case with many of Aladdin's 1920 houses (Aladdin, 1920; Hornbeck, 2015; Sears, 1926). Though full indoor plumbing in homes could be found with relative ease in the metropolitan areas and suburbs at this time, it was still very common for rural households to not yet have such conveniences. New homes being built on farms and the like were not necessarily being equipped with bathrooms by default. Thus, rural consumers were most likely the ones expected to purchase either company's toilet-less farm houses. In a similar vein, Sears *really* tried to corner this rural market by also selling its own kit outhouse (Hornbeck, 2015; Sears, 1926).

Of course, all of the houses sold by both Sears and Aladdin were meant for use as year-round dwellings. For a time, though, both manufacturers also sold their own versions of seasonal vacation cottages (Aladdin, 1920; Sears, 1926). Though these were not meant for winter inhabitation, there is little doubt that at least a few people would have attempted to use them as

all-season homes (perhaps due to their comparative affordability, or simply because they were cheaper to buy). The cottages of both companies will be discussed more in-depth further on.

Better glass having been used in the windows of Sears' Honor Bilt homes reminds me of a story relayed to me by my great-uncle about the windows which had formerly adorned his childhood home (which he ended up living in for life) (J. Hamm). According to my uncle, his old farm house, which very well might have predated any Sears house (and possibly the Sears company itself, initially founded in 1886), had particularly brittle glass windows (J. Hamm; Hunter, 2012). He told me that if one were to ever break, the family would have suffered quite a bit. This was almost certainly during the Great Depression. When I asked about what they would have done IF a window broke back in the day, he said something along the lines of, "Then we got cold. So we didn't let them break" (J. Hamm). My uncle's family at some points would have had trouble affording a replacement window in such a situation. The family was in such dire straits financially that they had been known to set fire to chunks of old car tires in the house's wood-burning stove for warmth when firewood was scarce. Regardless, his memories of these window experiences lead me to believe that, at the time of the printing of the 1926 Sears catalog, many old buildings would have still had similar thin, primitive glass in their windows, and any advertisement supposedly selling sturdier, stronger windows would have definitely caught the attention of someone like him, who had suffered under the previous standard. This goes to show that the utilization of new, more advanced construction techniques/technologies by kit house companies not only made for a better product, but also allowed for a higher marketability of said products.

## Marketing: Standard versus Non-Standard Features

Many (if not all) major catalog home companies offered special “upgrades and extras” to go with or add onto a buyer’s new abode (Hunter, 2012, 10; Sears, 1926). Some of the more mundane examples of these would have been storm windows and doors, screens for windows and doors, special interior trim made from cherry, and asphalt roofing shingles (in lieu of the standard wooden ones). For a while at least, Aladdin offered a fancy doorknob for its homes... which was heavily embellished with the company’s logo. While said knob was actually quite attractive, this pseudo-product placement is almost comical, if only because said knob cost the customer extra money. I would have had a much different reaction if this knob was a standard, no-cost feature. The irony here is that, in enforcing an extra cost on a conspicuous object with its own logo on it, Aladdin wasn’t merely receiving free advertising, but instead effectively getting *paid to advertise itself*. Thus, not only would purchasers of this knob in the stead of a plain one be constantly reminded of the company whenever they opened, closed, or looked at a door, but they will have *paid extra for the “privilege” of doing so*.

One could even say that some of these extras, such as the screens, are so mundane that the sellers had been committing false advertisement in claiming that their basic kits contained complete houses (Hunter, 2012; Sears, 1926). It is also interesting to note that most (if not all) house model depictions in the 1926 Sears *Modern Homes* catalog appear to be shown with the optional asphalt shingle roofing. This seems kind of misleading, since any reader’s initial assumption would have been that the depicted house comes with an asphalt roof by default, when in reality this was not at all the circumstance. Unlike today’s automobile advertisements, in which the phrase “Optional features shown” always appears whenever the car in question has said features (which is almost always the case), no such direct disclaimer is provided in the 1926 Sears catalog



(other than the list of “options” and their costs... the reader would have had to make this connection him/herself). Of course, none of this is meant to demonize wood-shingled roofs. They certainly look a lot nicer and more “classic” than asphalt. However, asphalt roofing has many benefits, as well: It is fire-resistant, rot-resistant, and longer-lasting than its wooden counterpart (G. Squires). The point is that such extra options available for kit homes were indeed financially significant for the companies involved. Apparently, this was an important source of income for the first large maker of kit homes, since “...sales records show that the Aladdin Company earned more money on upgrades and extras than they earned selling the basic homes” (Hunter, 2012, 10).

### **Marketing: “Buy Some More!”**

Companies vending a wide range of products besides kit houses (such as Sears and Montgomery Ward) were not ashamed of attempting to “cross-market” between their different catalogs (Hunter, 2012, 41; Sears, 1926). These other, non-building offerings by such organizations included appliances, furniture, and tools [FIGURES 13-A and 13-B]. Such companies as Sears ideally would have wanted a potential customer to build and live in a Sears house fitted with Sears appliances, filled with Sears brand furniture. He/she would also use Sears brand tools, and drive a Sears automobile (indeed, Sears, Roebuck also used to sell its own cars, too) [FIGURE 14] (Tate, 2016).

Besides the aforementioned trivial offerings, however, many of the extra upgrades available from companies like Sears were actually much more substantial, or at the very least, interesting (Sears, 1926). In some cases, such products were arguably sizable feats of innovation. These pieces of labor-saving or general life-improvement technology, though simple in concept, seem to have provided notable, real solutions.

Several of these features were presented on the “Millwork for Modern Homes” page of the 1926 catalog, and claimed to be “exclusively “Honor Bilt” Modern Home features” (Sears, 1926, 111). However, since said products were manufactured by Sears itself, these wares could indeed likely have been purchased alone, without one needing to buy an entire house just to obtain them (Hunter, 2012; Sears, 1926). One such extra feature was Sears’ “Kitchen De Luxe Outfit”, which at first glance appears to be nothing more than a sink (overlooking a window) with a tile counter top, and dual wall-mounted and baseboard cabinets symmetrically oriented on each side [FIGURE 15] (Sears, 1926, 111). This seems like a pretty standard, run-of-the-mill setup. However, the real innovation here is that the space between the cabinets below the sink contains an adjustable, cabinet-mounted, swivel-out stool. One can imagine how handy this would be for washing dishes or peeling vegetables for an extended period of time. These jobs are inherently already hard enough work... there is no need to have to *stand up* while doing them. When not in use, said stool appears to handily swivel back under the sink, “floating” off the floor, both preventing said floor from getting marred up and keeping it easier to clean. I highly doubt that Sears was the first company to sell this hideaway stool idea (which was probably also available as a standalone unit for retrofitting existing cabinetry), but one can see how much easier it could potentially make arduous, everyday tasks.

A “breakfast alcove” happened to come standard within the plans of many of Sears’ 1926 homes [FIGURES 15 and 16-A] (Sears, 1926, 111). This was a small room, separate from and yet open to the kitchen, in which a table flanked with “Dutch” benches were provided (Sears, 1926, 72). Supposedly, the purpose of this nook was to provide a place to eat breakfast while bypassing the need to soil the actual dining room in the process. Within the pages showcasing the Sears “Hamilton” house, it is insisted that “Eating here [in the breakfast alcove] of a morning adds zest

to the meal” (Sears, 1926, 65). If one is confused as to what, exactly is meant by this statement, or how such a claim could be proven, she/he is not alone, since it is a prime example of the “...appealing but unsubstantiated descriptions of the homes...” so often utilized in kit house marketing, according to Hunter (Hunter, 2012, 41). Interestingly, the “Breakfast Alcove” is listed under the page advertising “Millwork for Modern Homes” (along with the “Kitchen De Lux Outfit” and several other accessories) (Sears, 111). I have to assume that in *this* case, the product being offered is the wooden seats and table, not the room itself (or both, as appears to be provided in the alcove-equipped house models).

Also, it is interesting to note that I immediately made a personal connection with Sears’ breakfast alcoves, having come across one very similar in a vintage home that I am very familiar with. The first time I saw the room, I wondered what the purpose of such a small space could possibly be, since it was totally empty and too small to hold a standard kitchen table (though it *did* have plenty of light, thanks to its large window) [FIGURE 16-B]. While working in the basement of this same house, I discovered a wooden dinette set consisting of Dutch style benches and a table [FIGURE 16-C]. For years, I figured that these were just outdoor porch furniture (since I had rarely, if ever, seen Dutch seats used anywhere except for on porches) which had been kept in long-term basement storage. It wasn’t until I saw the reprinted 1926 Sears *Modern Homes* catalog that I was able to come to the conclusion that these benches and table were meant to be used in the nook off of the kitchen, seemingly sized perfectly for them! While not a Sears kit home, the house in question was built during the same era, and thus likely with similar sensibilities in mind. Nor are the benches and table likely of Sears origin, since they are of a different design than those depicted in the catalog (though they could still just be a different version or generation of the same product). Coincidentally, this same house also has a hideaway,

wall-mounted ironing board comparable to the “Built-In Ironing Board Outfit” also advertised on the “Millwork for Modern Homes” page [FIGURES 15, 17-A and, 17-B] (Sears, 1926, 111).

Perhaps the house feature offered by Sears in 1926 which most impressed me was the “Triple Unit Clothes Closet” [FIGURE 15] (Sears, 1926, 111). Even as someone who would never purchase such a thing, I was honestly enthralled by the system’s simple ingenuity. Three pretty standard-sized closets are installed next to each other in a wall. Each has an identical, traditionally sized, swing-out door, on which are mounted large, nearly full-length mirrors. Running the length of and above the row of doors is one large storage compartment, with access doors mounted in alignment with the mirrored doors below. Each of the three closets has a rod for hanging up clothes, and a drawer at toe-level, meant for shoe storage. These shoe drawers seem to have made good use of the often-wasted space beneath the rod-hung garments. However, what really impressed me about this setup was the idea behind the mounting of the closet doors themselves. The leftmost and middle doors were opened from the left-hand side, and the rightmost door from the right. This in combination with the large mirrors on each was to make it so that, with the middle door shut and the flanking doors left open, one would have access to an instant (nearly) all-around mirror, kind of like that which is found in clothing stores, allowing the potential customer to see him/herself from multiple sides at once. According to Sears’ advertisement, this was “The best closet arrangement known to architecture. Room for the most complete wardrobe in which garments are kept in better condition than in ordinary closets” (Sears, 1926, 111). Good though the product may have been, this statement is yet another example backing up Hunter’s claims of these companies’ vague and unproven promises used in the advertisement of kit house-related products (Hunter, 2012). Is the Triple Unit Clothes Closet really the absolute best? Wouldn’t that be a matter of opinion, instead of fact, anyway?

Regardless, the real poetry of the Triple Unit Clothes Closet is that this tri-mirror functionality is completely hidden and unassuming, and as such, one can imagine someone living in a house equipped with such a system for years without realizing why, exactly, the rightmost door swings in a different direction than the others! One downside to this system is that the closet doors would need to be mounted perfectly straight on their hinges, lest they not stay in place when in use as a three-sided mirror. Furthermore, even if mounted perfectly from the start, the house in which the closets themselves were built could settle over time, ruining their formerly pristine alignment.

In 1920, Aladdin offered multiple interior extras to be used in the company's homes, more or less comparable to Sears' offerings above (though *definitely* less unique and innovative), as seen in the year's catalog (Aladdin, 1920). One thing which a reader of this publication might find rather alarming and strange is the company's steadfast assertion, "These fixtures sold only in connection with Aladdin Homes", different variations of which are repeated on multiple pages (Aladdin, 1920, 104, 105). It is unclear whether this means that only owners of Aladdin house kits would be allowed to purchase and use these products, or if it is simply meant that said products can only be purchased via the Aladdin Company. The ambiguous wording makes either a possibility. At the same time, another page displaying two different kitchen cabinet sets and a buffet states that these specific items, "...are sold only with Aladdin homes" (Aladdin, 1920, 107). It is difficult to deduce whether these two disclaimers are meant to mean the same thing, or something entirely different.

An odd class of Aladdin's interior extras was its line of "Colonnades and Arches", of which three variants were offered in 1920 [FIGURE 18] (Aladdin, 1920, 104). Obviously, none of these would have actually been load-bearing, since they were meant for installation in buildings which

were already structurally sound. These were purely decoration, though one type actually featured dual built-in bookshelves, thus making for some storage space. Other than this, these archways did little other than look pretty and take up floor space. Ironically, one could say that Aladdin's 1920 mail order colonnades were the closest of any of its extras innovation-wise to some of the items which Sears was selling in 1926, such as the Triple Unit Clothes Closet. To be clear, this wasn't due to any practicality or innovation involved in the Aladdin arches, but just because of the uniqueness of the idea of ordering through the mail something as random, yet specific, as an archway meant to fill a specific space within a home's interior.

Like Sears, Aladdin also offered its own optional closet, known as the "Aladdin Closette" [FIGURE 18] (Aladdin, 1920, 104). Apparently the marketers thought that making the product sound French would give it more appeal. While the Closette's description may rightfully praise its practicality and efficient utilization of space, this piece of furniture is really nothing more than a (hopefully) well-built, handsome wardrobe-cabinet, and not nearly as innovative or interesting as the Sears Triple Unit offering.

For the most part, the remainder of Aladdin's 1920 mail order interior additions were, like the Closette, pretty standard, nothing too special. However, they appear to have been made of decent materials and sturdily designed, as well as visually pleasing. These included fixtures like kitchen cabinet sets (with built-in flour bins), various styles of buffets, and a bathroom cabinet.

It is also noteworthy that both Aladdin and Sears offered kits for actual exterior, structural additions to houses (Aladdin, 1920; Sears, 1926). The nature of the variety of these exterior additions is actually the exact opposite of the interior fixtures, as described above: Here, the 1920 Aladdin catalog lists a greater number of much more-creative offerings than that of Sears for 1926.

In 1926, Sears only offered two variants of a single structural addition, a Sun Room, dubbed “The Year Around Porch” [FIGURE 20] (Sears, 1926, 108). The only discernible difference between the two seems to be that one had a somewhat shallow, pitched roof, while the other apparently had a flatter roof topped by a decorative railing. Other than that, they were the same seven-window, enclosed porch, apparently meant for construction on a real, cement and brick foundation. Like Sears’ mail order homes themselves, these came with almost everything needed for completion, including the wooden framework, sheathing, siding, trim (both interior and exterior), lathe, plaster, paint, and so on. However, unlike said Sears homes, nowhere in the sun rooms’ advertising is it stated that any of its provided components are pre-cut. It is possible that the appropriate amounts of each material were simply provided in bulk, with the consumer needing to measure and cut everything by hand (Hunter, 2012; Sears, 1926). It is also of note that Sears’ sun porches could apparently be added onto any home, regardless of whether or not it was a Sears kit.

As per its 1920 catalog, Aladdin offered five different kits for various structural additions (labelled “Addition A” through “Addition E”), each of which differed significantly (Aladdin, 108-109). Additions “A” and “B” were lean-to-type add-ons, meant to be used however the home owner saw fit: as a bedroom, a kitchen, a bathroom, an entryway, or whatever else. It is noteworthy that, as was the case with Sears, Aladdin offered multiple house kits lacking bathrooms (Aladdin, 1920; Hornbeck, 2016). It thus makes sense that people liking these small homes may have also wished to have a complete, indoor bathroom, without sacrificing already limited interior space. Thus, Aladdin’s structural additions, presumably assembled in a similar method to those of its actual houses, would have made a lot of sense to many as the basis for an added bathroom.

Aladdin's "Addition C" was also a variant of the enclosed lean-to concept, and quite ingenious in design, as well [FIGURE 21] (Aladdin, 1920, 108-109). It served as a convenient dual interior/exterior basement entryway which, like "A" and "B", did not detract from the default home's floor space. While "C" has a smaller exterior entry port than that of a traditional set of outdoor cellar double-doors, it has the advantage of simultaneously serving as an *interior* entrance, as well: with this addition, no other basement entryway would be required. Once installed, one could open a door from the inside of the house, travel down a short flight of stairs to a landing, turn 180 degrees, and proceed down another flight to the basement. An exterior door opens onto said landing, allowing either entrance/exit to or from the house, or to or from the basement. The exterior wall adjacent to the lower flight of stairs likely would have been a handy place to hang hand tools.

Finally, Aladdin's 1920 Additions "D" and "E" were variants of two-story screened-in sleeping porch/sun room additions [FIGURE 21] (Aladdin, 109). These were by far the largest Aladdin additions available by square footage for 1920. Both consisted of screened porches at the ground level, with sleeping porches (accessible from the home's second story), "stacked" above.

"Addition E", the larger of the two, had its first level split into a porch and an enclosed, multi-use room. Either version could have its upper parts equipped with removable glass windows for the cooler seasons (ironically, this was an extra-cost feature *for* an extra feature itself).

Unlike the case with the Sears sun room add-ons, The Aladdin structures were explicitly stated to be "Designed and sold for use on Aladdin Homes Only", leaving absolutely no room for interpretation, unlike Aladdin's interior "extra" offerings, as already discussed (Aladdin, 1920, 108). One might wonder how the Aladdin Company would have been able to actually enforce this policy, and even if it somehow could, would it even bother, and why? It couldn't be that



Aladdin was hoping to sell entire houses to people who just wanted to buy one of their exclusive basement entryways or sleeping porches.

### **Still Other Offerings:**

Some mail order home companies (especially Sears) offered kits for other types of buildings, beyond houses (Hornbeck, 2016; Hunter, 2012; Sears, 1926). Sears' 1926 kit publication contains a subsection advertising the company's "Modern Farm Buildings" catalog (Sears, 1926, 109). It states, "Our Farm Building Catalog contains a big variety of scientifically planned Barns, Hog Houses, Corn Cribs, Granaries, Implement Sheds, Poultry Houses, and Silos" (Sears, 1926, 109). One must wonder how "scientifically planned" these buildings actually were. Though the supposed excellence of engineering and materials is cited throughout the catalog, the use of the "science" word here seems like an example of consumer pandering (Hunter, 2012; Lewis, 2015). Regardless, judging by the various depictions of Sears' farm building catalogs which I have come across, the company did indeed supply some serious, massive barns which probably indeed performed their duties well. Sears, Roebuck also sold an outhouse which could be rapidly erected through the use of pre-assembled, panelized components, a system which the company would apply to a whole series of different "Simplex Sectional" buildings [FIGURE 22] (Hornbeck, 16-17; Sears, 1926, 121, 124).

The Aladdin Company also offered its own line of farm buildings, "Aladdin Read-cut Barns", though it has been argued that these offerings were less significant to the market than those of other companies, such as Sears (Aladdin, 1920, 112; Hunter, 2012). These seem to have been available in the same, pre-cut kit format as that used in Aladdin's houses. Also like the houses themselves, the company insisted that the quality of materials and substantiality of design of its barns were far better-than-standard. It goes as far as to say, "We appreciate the great weight and

strains that are put in farm barns at times, and each barn is constructed so as to stand a greater weight than it will ever be called upon to hold” (Aladdin, 1920, 112).

For 1920, Aladdin advertised a relatively-modest lineup consisting of two primary barn subtypes, named the “Gable Barn”, and the “Gambrel Barn” (the only difference between the two being the roof type) [FIGURE 23] (Aladdin, 1920, 112-113). Both variants seem to have been available in sizes ranging from 16 by 24 feet, to 30 by 100 feet, with prices adjusted in respect to size (Aladdin Price Sheet, 1920). The 16 by 24-foot Aladdin “Special Barn” was also available at this time (Aladdin, 1920, 112). This was a gable-roofed structure advertised as a response to customers’ demands for a building that could house two to three horses, and multiple wagons.

Various, basic options were available to meet the specific needs of those intending to purchase Aladdin Read-cut barns. Any of these structures could be purchased with or without a 12 foot-deep, second floor loft, a wooden ground floor, and/or stalls for livestock. The deletion of the plank first floor, for example, could save an owner money, funds which could in turn be used for a more durable, easier-to-clean concrete floor (Aladdin, 1920; G. Squires; Sears, 1926).

Impressively, it is also noted that the lumber provided for Aladdin’s barns was processed in such a way as to give the buildings’ interiors “...a finished appearance and is not merely of rough, unfinished lumber” (Aladdin, 1920, 112). This is a very nice consideration, since even today, often very little to no effort is put into making the interiors of outbuildings look nice or finished (Parker, 2014). It is also notable that, when ordering an Aladdin barn, the customer was given the option of choosing either horizontally- or vertically-oriented siding. It seems to have been very considerate on Aladdin’s part to have supplied the customer with his or her siding-preference here, apparently at no extra cost.

Sears' "Simplex Sectional" garage and "summer cottage" kits (as well as its 1926 outhouse) deviated significantly from the company's regular kit formula, in which almost everything needed to be assembled from separate components (items such as medicine cabinets and "colonnades" were generally exceptions to these rules) (Sears, 1926, 8, 121; Hornbeck, 2016). Instead, these "sectional" buildings really were just that: Provided in pre-assembled wall, roof, and other chunks, meant to be held together using an "interlocking section joint" system integrated into the completed building's walls (Sears, 1926, 121).

Based on the illustrations provided in the 1926 *Modern Homes* catalog, this panelized construction method seems to have resulted in an interesting (though certainly not unpleasant) fit and finish in regards to the outer walls. Wherever two interlocking wall sections were bolted together, a tab running the length of one would first be inserted into a slot built into the other. This system is comparable to that which is used in the morticed slots ("grooves") and tabs ("tongues") of tongue and groove hardwood flooring (G. Squires; Sears, 1926). Thus, one end of the panel would exhibit the tongue, and the other the groove. The only difference was that, rather than having the slots and tabs carved directly into a solid piece of wood, the Simplex Sectional panels were constructed in such a way that the slots were built out using parallel planks halfway sandwiched over the inner wall member, with the other half overhanging on the end for another, adjacent wall-unit to slide directly into [FIGURE 22]. Due to the nature of this system, then, one of the outer groove planks would generally be exposed on the outside of the finished building, marking each 3-foot wide section. Thus, every three feet of horizontal, wooden siding would be interrupted by an outset, vertical plank [FIGURE 24]. This isn't a characteristic that is necessarily displeasing from an architectural standpoint, either. One could argue that the verticals

actually add a bit of simple, pseudo-decoration to what may have otherwise been just a plain, monotonous wall.

The Aladdin Company also offered its own line of mail order kits for the construction of various cottages and garages, though these were constructed from loose, precut, labelled pieces using the Read-Cut System, just like the company's homes (Aladdin, 1920). However, Aladdin's "Sovereign Summer Cottages" (and perhaps the garages, as well), seem to have been built with lumber that was of a somewhat lower grade than that used on the actual houses. It is stated that "The frames of all summer cottages are of good, clean No. 1 dressed lumber; of proper size and design not greatly dissimilar to dwelling houses" (Aladdin, 1920, 114). Regardless of these framing members being "not greatly dissimilar", this doesn't excuse them from still being *not of identical quality* to that provided for Aladdin's other offerings (though probably still adequate for their purpose). Furthermore, the cottages were to be equipped with "practically clear Yellow Pine or Oregon Fir" siding (Aladdin, 1920, 114). So besides not being the sturdy cedar siding standard to Aladdin's other structures, these pine or fir planks apparently have no "A-Dollar-A-Knot" guarantee paid to the consumer for every such imperfection found (Aladdin, 1920, 8).

Regardless of nitpicks, however, Aladdin's cottages really do seem to have been decent, sturdy buildings, even though they were generally smaller, containing of fewer amenities, and being much less elaborate than those of Sears, Roebuck (Aladdin, 1920; Sears, 1926). A prime example of how the two companies' seasonal dwellings compared amenity-wise can be seen in the fact that of the six Simplex Sectional Summer Cottages advertised by Sears for 1926, three came with bathrooms by default, and a fourth could be ordered in a bathroom-containing variant. By comparison, none of Aladdin's cottage kits were equipped for bathrooms.

It is also interesting to note that some of the actual houses marketed by Aladdin (*not* sold as cottages), such as the “Chester” and the “Rodney” were just as small, if not smaller, than some of its buildings marketed as seasonal cottages (Aladdin, 1920, 76, 86). Also like the cottages, these homes lacked bathrooms. The primary thing which seems to separate such smaller houses from the cottages is certain aspects of general build quality and fit and finish. Sheathing is present over the framework, under the siding of every “Aladdin Dwelling House”, adding structural integrity to the building, as well as possible insulation and sound-deadening qualities (Aladdin, 1920, 8; G. Squires; Sears, 1926). The cottages on the other hand are not sold with any wall sheathing, as their siding gets nailed directly onto the structural framework. The special “tongued and grooved” siding sold with the cottages allows for this direct-nailing, though the use of proper sheathing will generally make a building technically stronger (Aladdin, 1920, 114). Furthermore, as already established, owners of all Aladdin houses were guaranteed to be reimbursed for any knot-holes found in the siding provided, while no such promises were made for builders of the company’s cottages.

Furthermore, the Sovereign Summer Cottages were not equipped with any kind of plaster for the finishing of the inner-side of exterior walls (Aladdin, 1920). By default, then, the buildings’ outer interior walls were simply comprised of the under-side of the building’s siding. In a similar semi-Spartan vein, none of the cottage rooms had ceilings, leaving the rafters exposed, and interior partition walls were of finished pine or fir. This, obviously, was not the case with Aladdin’s Readi-Cut houses, which generally came equipped with plaster and lath for the finishing of all interior walls and ceilings. Based on the catalog’s illustrations, one may also find that the Sovereign Summer Cottages might seem slightly more architecturally sparse with less ornamentation and detail than the actual Readi-Cut Homes (such as in always having simple,

square porch-posts instead of rounded or turned ones) (Aladdin, 1920). Then again, this could simply be a false conclusion drawn by the mind in search of differences between these supposedly less- and more-refined structure types. Taking all of the above together, one might deduce that the Aladdin Company's differentiation between its Sovereign Summer Cottages and year-round residential dwellings doesn't come down to size or default amenities as much as the structural and material quality of the final product.

One final parallel can be drawn between the kit cottages of Aladdin and Sears. Besides full-size kit houses and smaller seasonal cottages, both companies also offered their own version of a simple hunting cabin: A small, camp-like structure much simpler than the rest of their respective lineups. Both were marketed as seasonal shelters to be used by outdoors-people needing a simple place to rest when out in faraway "hunting grounds" or the like (Aladdin, 1920; Sears, 1926; 124).

Sears' version of this idea (offered in at least 1926), simultaneously dubbed the "Hunters' Cabin" and "Trap Shooting House", was a 12- by 9-foot (interior), single-room structure featuring a large porch and windows that could be shuttered in the off-season [FIGURE 25] (Sears, 124). This building was actually modular, being built of pre-constructed panels bound together much like, if not identical to, the Simplex Sectional system, and yet, like Sears' cheaper sectional garages, not marketed under the Simplex nameplate. The panelized nature of this building was actually advertised as allowing an owner to be able to easily disassemble, move, and reassemble this cabin with relative ease "as the hunting grounds change" making said structure semi-portable (Hunter, 2012; Sears, 1920, 124). One must wonder how this would have worked without compromising the building's rolled asphalt roof... How could one disassemble said roof into panels in such a way that wouldn't totally destroy its water-tight properties? Wouldn't the

roof need to be completely replaced upon reassembly? Perhaps Sears wasn't actually expecting anyone to attempt to take the building apart again after having gone through all of the work of putting it together the first time.

Aladdin's take on the hunting cabin concept (available at the very least for 1920), was known simply as the "Aladdin Hunter's Lodge" [FIGURE 26] (Aladdin, 1920, 116). Like the other Sovereign Summer Cottages, the Hunter's Lodge was assembled using Aladdin's Read-Cut System (in true kit format), rather than modular panels. Like its Sears counterpart, the Hunter's Lodge seems to have been a one room building, though it was significantly larger at 12- by 16-feet, and meant for permanent, *stationary* installation. Besides a hunting retreat, this shack was advertised as a useful "settler's house", as well (Aladdin, 1920, 116). Theoretically, then, someone planning on starting a farm or something in a remote area could erect, and then live in, this building while perhaps eventually constructing a bigger abode, as well as other useful infrastructure. Pushing the outdoors-y intentions of the Aladdin Hunter's Lodge, the illustration accompanying its description depicts it as having an animal skin (perhaps from a beaver?) tacked onto and stretched over its front-wall, to the right of the entrance.

Sears' Simplex garages and cottages could be erected in just two or three days, though, as previously explained, such advertisements all needed to be "taken with a grain of salt" in regards to their truthfulness. In the lead-in section of the showcase of Simplex models is a series of time-lapse images in which one of the garages is being assembled [FIGURE 22]. The ad asks the reader to "Note the illustrations at left below which are actual photographs of the erection of one of our garages" (Sears, 1926, 121). The genuineness of these photographs is highly doubtful, however. Though one will realize that printed media wasn't nearly as high definition in 1926 as it is today, the supposed "photographs" certainly look like printed plates of something that had

been drawn by hand (an illustration). Further muddling the truth is that the associated pictures are simultaneously called both “actual photographs” and “illustrations” (Sears, 1926, 121).

For 1920, Aladdin offered five different garage kits, all of which are implied to be constructed, like the company’s homes, from precut, labelled parts, and claimed to be comprised “...of the same splendid grades of material entered into the construction of our dwellings” (Aladdin, 1920, 110).

Two of these garages, the “Buick” and the “Packard”, are obviously named after the high-grade automobile brands (Aladdin, 1920, 110-111). Ironically, however, the smaller variant of the “Buick” (which came in two sizes) was marketed as being the exact smallest size needed in which to store a “Ford touring car with the top either up or down” (Aladdin, 1920, 110). If the garage was essentially built “around” a Ford car, then why was it named “Buick”? One’s best guess as to the method behind this nomenclature may be that Buicks, cars which generally were (and still are) more expensive and luxurious than Fords, were seen as having more favorable marketability than their cheaper counterparts when referenced in a nameplate. This way, owners of luxury and semi-luxury cars such as Buicks wouldn’t be driven away from the idea of parking them in a supposedly lower-class “Ford” garage. Similarly, Ford drivers, who presumably would have been perfectly satisfied in parking their cars in a “Ford” garage, would probably also have absolutely no problem using an upgraded (in name only) “Buick” garage. Of course, the names simply assigned to a given, already-designed product could never have any tangible effect on said product’s actual quality.

Similarly, the naming of Aladdin’s “Packard” garage was likely another attempt to push the idea of this building’s high-quality and large size by associating it with an automobile brand known for the same characteristics. This building, which was available in either two- or three-car



format, was arguably the most elaborate car house in the lineup, having such special features as five windows, a person-sized “service” door, and two to three large, swinging double doors, the upper portions of which were completely clad in windows. It is also the only 1920 Aladdin garage with a “hip-on-gable” roof, something which the catalog claims to endow the building with “...an individuality immediately apparent” (Aladdin, 1920, 111; McAlester, 1996, 43). Of course, like an actual Packard, the features inherent to the larger (3-car) variant of Aladdin’s aptly-named garage came at a cost: It was Aladdin’s most expensive garage of 1920, at \$722.00 gross (Aladdin Price Sheet, 1920). Regardless, any owner of a huge, extravagant Packard car would have been proud to store it in this equally large, feature-sporting “Packard” garage. Of course, as described regarding the “Buick” garage above, owners of affordable Fords, Chevrolets, and the like would have also been equally happy to own and use “Packard” garages to protect their automobiles.

Based on Aladdin’s 1920 *Catalog 32*, Second Edition, it is unclear for sure whether or not the company used the “Ford”, “Buick”, and “Packard” names with the permission of their respective owners. However, since there is no note explicitly stating that said names were “used with permission”, it is safe to assume that they weren’t. One could argue that the use of “Buick” and “Packard” as names here weren’t explicit references to these respective cars (unlike that of Ford, which definitely was), but used generically, as is the case with the “family”-type names like “Worthington” and “Franklin” applied to many of Aladdin’s homes (Aladdin, 1920, 36, 56-57). However, unlike these names, “Buick” and “Packard” are certainly not at all common, and as such, there is no way that they were used coincidentally in reference to these car storage structures. Obviously today, the unauthorized use of and/or references to such copyrighted names

as “Buick” and “Ford” in a third party’s advertisements (such as those of Aladdin), would likely be met with resistance from these properties’ respective owners.

Upon initial inspection of the Sears Simplex garages, I didn’t realize that the buildings illustrated were meant to be used as actual garages (for automobile storage), but instead believed them to be tool sheds or the like (Sears, 1926). But then, being the classic car enthusiast that I am, I remembered that automobiles of all types used to be much smaller, thus requiring less room to store. Similarly, I was surprised by the diminutive size of the standard “service door” that came with Sears’ “Utility” garage (which was not considered to be of the Simplex nameplate, but still sectional, nonetheless), meant to supplement its main large, swinging doors (Sears, 1926, 125). This portal, supposedly meant for a human being to pass through, measured only two feet wide by six feet tall. Even the optional service doors on the nicer Simplex garages were only slightly larger, by six inches in width and height! However, these small doors, like the small garages themselves, would have been more-feasible during the twenties, since Americans weren’t nearly as overweight on average as they are now. Ironically, both our cars and bodies have bloated to unnecessarily large proportions since 1926. Really, there is no need for our automobiles to be as tall, wide, and long as they are today. This only harms their efficiency and practicality. We should be able to fit almost any type of vehicle into a Sears Simplex-sized garage... it is as if we have taken a step backward technologically in this respect. The same goes for the fact that so many Americans are overweight. Regardless, I feel that wider, taller service door-sizes are much more practical for *anyone* to use. I guess that is *one* thing we generally build to the proper dimensions in the present day.

My initial confusion due to the miniscule size of Sears’ sectional garages is directly related to the evolution of the general concept of the modern garage. During the times of nearly universal

horse and wagon or carriage-based conveyance, those who could afford such personal transportation would store their livestock and pulled vehicles in a building specifically devoted to this purpose, completely separate from the family's house (McAlester and McAlester, 1996). When one wished to travel a long distance, he or she would walk out to the barn, hitch up the horses, and ride off. One was completely exposed to the elements on the way over to the storage building. Of course, unless someone was fortunate enough to own an enclosed carriage, he or she would surely be getting soaked while travelling during bad weather, anyway.

Rainy weather was of no concern in the basic travel of wealthier homeowners, however. This is because their houses were often equipped with "porte-cocheres" (McAlester and McAlester, 1996, 522; Pipkin, 2015). These were open-walled structures attached directly to a house, and large enough so that a horse and carriage could easily be driven under and through. Porte-cocheres generally arched over the home's private driveway (which would in turn attach the carriage house/barn and house both to each other and the public road). A door from the house would open beneath the porte-cochere, allowing residents to be sheltered as they walked from the house to a parked or standing carriage.

Obviously, a covered, short-term parking spot still wouldn't eliminate the need to retrieve the horses and carriage from their separate building. However, those who could afford houses featuring porte-cocheres most likely could also afford servants, including a driver (Pipkin, 2015). Thus, getting wet on the way to the barn was the driver's problem, and not one of direct concern to the homeowner(s).

Even after horse-drawn transportation fell out of use in favor of automobiles, surviving porte-cocheres could have still largely been used as they were originally intended. This is because for decades (and even into the present day, though to a much-diminished extent), like horses and

wagons, cars were often stored in their own devoted buildings, separate from the house (McAlester and McAlester, 1996). Furthermore, the very rich would likely still have hired drivers, who would retrieve the cars from their shelter and park beneath the porte-cochere so the homeowner and his/her family could enter the car unscathed in most weather (Pipkin, 2015).

The porte-cochere concept, as used in the above sense, would steadily become obsolete, however, as cars became increasingly stored in garages directly accessible from their associated houses (either as attached structures, or storage-bays within the “principle mass” of said houses themselves) (McAlester and McAlester, 1996, 30). The growing belief in the “necessity” of attached garages (of either type) has resulted in changes in the dimensions and fashion of newly-constructed houses since at least the 1930s, but most widely and significantly since the 1950s.

Whereas the average square footage of a home’s “footprint” devoted to car storage in 1930 may have been around fifteen percent, this same proportion had skyrocketed to forty-five percent by 1960 (McAlester and McAlester, 1996). It is a safe assumption that garage sizes have continued to increase since the sixties (due to the general, continued increase in the size of automobiles), though it is possible that average house sizes have also risen over the same period. Kunstler has noted that the growing presence of automobiles (and in turn, garages), in today’s suburban neighborhoods has been made obvious by the dominating presence of the garage doors themselves (Kunstler, 1996). It is not uncommon for a house’s street-facing side to have half of its surface area composed of garage doors. This is something that Kunstler says “...invariably compromises whatever remains of the building’s dignity,” and I am inclined to agree with him (Kunstler, 1996, 102). This goes hand-in-hand with a theoretical anecdote once relayed to me in class. If someone who knows nothing about suburban society and nearly nothing about architecture was brought to one of the United States’ average suburban neighborhoods and asked

to describe who, exactly, lives there, he or she would very likely guess that the buildings were all inhabited by *cars*, rather than people (Pipkin, 2015). After all, those overhead doors aren't meant for people, and clearly they are given a higher status on the buildings' facades than the human-sized entryways.

Looping back to the topic of Sears and Aladdin kit garages, then, one can see that these structures fall into a relatively early place on the timeline of the evolution of the garage concept. Both companies' kits tended to be generally small (much like the cars which they were meant to shelter), and were always separate from the home that they were associated with, like the carriage houses and horse barns which predated them. Of course, owners of houses sporting porte-cocheres very likely would have wanted bigger, more elaborate car storage solutions than companies like Sears and Aladdin had to offer.

It is noteworthy that the Simplex Sectional cottage kits were provided with cedar post foundations and preassembled, three-foot sections of flooring, while the garages did not come standard with such measures. It is explicitly stated in the catalog that this was done under the assumption that the garages were to be built on top of "concrete foundations" (the materials for which did not come with the kits) (Sears, 1926, 121). Interestingly, anyone with at least some construction knowledge knows that it is generally a bad idea to use a wooden pole-based foundation, in which wooden pilings are put directly into the dirt, for *any* kind of building (G. Squires). Dead wood and moisture never go well together (sans a few exceptions, such as with wooden boats, which aren't necessarily constantly submerged and can last forever when maintained properly), always resulting in bad rot, and thus compromised structural integrity. Thus, the reliance on a building-foundation comprised of wooden pilings poked into wetness-trapping dirt almost never corresponds to structural longevity. The general consensus is that such

“pole barn” type foundations can only last for about 30 years before starting to rot, at which point, if the know-how and funds are available (as well as considerable luck), one might be able to jack up the building, chop off the posts, and set it back down upon a proper cement or stone foundation.

All of this is my rather roundabout way of explaining my hypothesis that it is quite possible that, proportionally, more Simplex Sectional garages have survived to the present day than Simplex Sectional cottages, simply due to the fact that the former were meant to be built upon cement foundations, and the latter on wooden posts. This is assuming, of course, that the buyers of these garages would have generally actually used such foundations (which, then again, is not at all a safe assumption).

Like the full-sized kit houses that Sears sold, all of its sectional garages and cottages came with names meant to increase their marketability (Hunter, 2012; Sears, 1926). For example, the name of the “Manor” garage was probably meant to reflect the building’s larger size and supposed luxuriousness in comparison to the other offerings, while the “Security” nameplate put forth the idea of said building being sturdy and dependable (Sears, 1926, 122, 123). But besides Sears’ panelized wooden Simplex Sectional garages (the pieces for which were shipped from its New Jersey plant), the company also offered a line of “sectional steel garages” (shipped out of its Ohio plant) (Sears, 1926, 126).

### **Still Other Offerings: Sears’ Obscure “Triple Sliding Door”**

One point that is repeatedly stressed in regards to the wooden Sears Simplex Sectional garages is that they all came standard with the company’s “Triple Sliding Door”, advertised as being so easy to use that even a small child could operate one with ease (there was even an accompanying

illustration of a little girl in the midst of opening such a door with a single hand) [FIGURE 25] (Sears, 1926, 124). The Sears Triple Sliding Door was marketed as an alternative to traditional “barn”-style doors, generally consisting of two doors “mirroring” each other in one frame, swinging out from opposite sides. Indeed, Sears made some really good points about some of the issues inherent to these older style doors. Most-notably, they were notorious for suddenly lunging closed in heavy winds, banging against and causing significant damage to any car or piece of equipment in the midst of being parked at a given moment. (Of course, this issue could be easily solved if secondary latches were installed on the doors to lock them into the “open” position, but Sears likely didn’t want anyone to figure that out) (Lewis, 2015). Such doors would also become blocked from opening due to heavy snow in the wintertime, unless constantly shoveled out.

Both of these issues, and a few more, were rectified with the Triple Sliding Door, said to be “THE PERFECT GARAGE DOOR” (Sears, 1926, 124). Admittedly, this system and its many features seem to really have been creative, effective solutions to such problems. One might describe it as being a chimera combining certain characteristics of sliding, single-piece “boxcar” doors, modern overhead “garage” doors, and even the old style double-swinging “barn” doors. This is because they slide horizontally on a track like a boxcar door, are comprised of multiple solid sections like an overhead door, and have a single section swinging on hinges (discussed below), reminiscent of a barn door. Each unit was eight by eight feet in size, and comprised of three pre-fabricated, wooden sections. They were attached to a set of bearing-equipped, flanged metal wheels on top, which in turn rode on a metal track hung from the above, inner garage wall and curving into and past that front corner, onto the adjacent wall. According to the catalog, the rollers “cannot get off the track”, (though the mechanism preventing this is never explained)

(Sears, 1926, 124). In the “opened” position, the door stored itself against the two inner, adjacent walls. Obviously no tools or equipment could be stored against or hung on the portions of walls that the door would need to “ride” against. However, according to Sears, this “waste” space was minimized, with the brunt of it being a 13-inch void in the door-storing corner of the building. One must wonder how many people lost brooms and similar tools in these corners after placing them there with the door closed, only to have them “disappear” upon coming back later, unwittingly screening the tools behind the open door!

The other ingenious feature of these Triple Sliding Doors was that one of the sections, besides sliding sideways with the other units, could also independently swing inward like a traditional “house” door. The resulting “service door” made it unnecessary to open the whole door if someone just wanted to go into the garage to quickly retrieve a hammer or other small item, and made a separate, “human”-sized door unnecessary (Sears, 1926, 124). However, the fact that such traditional house-type doors were still offered as optional extras to the Simplex garages leads me to believe that these still remained the most practical option for human ingress and egress.

The company wasn’t shy about admitting the high cost of their patented sliding track doors, readily claiming that an entire unit would cost “over three times as much as the ordinary kind [of door]”, though it was a standard feature of “NO ADDITIONAL COST” that came with every Simplex garage (Sears, 1926, 124). However, Sears claimed that even at the doors’ high prices, they would soon pay for themselves with the money saved from no longer having to constantly get one’s car repaired due to the banging of traditional doors into said vehicles when being parked or backed out in windy weather.



In my personal experience, I can remember only ever coming across one sliding, sectional door meant to ride on a curved, “hide-a-way”-type track (and it is likely not even Sears-branded). To the best of my knowledge, this particular door has never even been functional in my lifetime. I’ve only ever known it to be stored in pieces, leaning against the inside back wall of a barn previously having belonged to my uncle (the same one who told me about his experiences with inferior window glass), and now in the possession of his son, my cousin [FIGURES 27-A, 27-B, and 27-C].

The relative rarity of these door types (and I feel that I am more qualified than many to independently make this distinction, having known many old buildings and been a fanatic of them for the entirety of my life), now that I better know their features and the problems that they were meant to combat, is surprising. This is especially perplexing when acknowledging that the much more complex overhead garage door systems have been the standard now for so long. Taking Sears’ word that their Triple Sliding Doors did everything that they were supposed to, it seems like they would and should have become the practical garage door-standard (at least for a time), or at the very minimum, caught on with people much better than actually seems to have been the case.

After all, overhead garage doors, despite their initial apparent ease of use, have many issues. Firstly, they seem to have many more components than Sears’ sliding doors. They require longer lengths of track, more rollers, and many more hinges. These doors (especially the older, solid wooden ones) are surprisingly heavy. And it is never fun for one to lift heavy objects *over* one’s *head*. The reason these doors *seem* so light is because of the heavy, coiled springs that help to pull them upward, and slowly lower them down (G. Squires). Anyone who has had to operate one of these with one or more broken spring(s) knows how integral these “un-sprung heroes”

truly are to an overhead door system. Even under normal operating circumstances, such springs regularly have notable levels of pressure placed upon them. My parents were once repairing such an overhead door, when one of its cables suddenly disconnected. The tension on the attached, powerful spring whipped said cable across the garage and nearly thwacked my mother in the head (G. Squires). That would have been a trip to the hospital, for sure.

None of this is to say that overhead doors don't have any advantages. The biggest is that they don't interfere at all with wall-space (unlike the Triple Sliders), leaving more room for people to hang up their tools and move around. Overhead garage doors are also the only system (that I know of) which allows for a nice, tight seal between the bottom of the door and the garage floor. This helps minimize (but never completely eliminate) the problems of wind, water, snow, and rodents getting under the door and into the building.

Regardless, due to the disadvantages (and in spite of the advantages) of overhead garage doors, it seems like Sears' Triple Sliding Doors (and those of similar design) should have developed more of a following among anyone with a garage. They probably even could have been retrofitted to accept electric garage door openers, for those who would prefer it (Connor, 2016). Such openers, in fact, might not need to "work" nearly as hard when hooked to any kind of sliding door, since they wouldn't be pulling weight perpendicular to gravity every time the door was used.

However, I suspect that the real reason that Sears' idea never caught on was because the company (as it so proudly proclaimed in its 1926 catalog), owned the patent on the idea, meaning that for a significant number of years, Sears was the only firm allowed to sell them (G. Squires). It could be that by the time the patent expired, all of the other companies had developed their own, non-patented systems (such as overhead doors), which were so common that they became

the standard, and as such, by the time the patent expired, no businesses were interested in developing sectionalized, sliding doors any longer.

### **Still Other Offerings: The Curious Case of Sears' Sectional Steel Garages**

The naming convention for two of the garage kits available from Sears' 1926 catalog is likely by far the most deeply embedded in historical context of any of the names utilized by the company, though (at least today's) casual observer may not realize this (Pipkin, 2013, 2015). The company's two steel garage-variants offered were labelled as the "Monitor" and the "Merrimac", respectively [FIGURES 28 and 30] (Sears, 1926, 126). These names, especially when placed in direct association with each other, may be recognized by history enthusiasts as probable references to the Civil War-era ships the USS *Monitor* and the CSS *Virginia*/USS *Merrimack* [FIGURES 29 and 31] (Thulesius, 2006). Both of these boats had been early experiments into the then-new field of "ironclad" ship-building, the goal of which was to construct wooden ships "clad" in metal that could withstand greater punishment in battle than their primarily-wooden counterparts (Bryson, 2007-2008, 2009-2010; Renner, 2006-2007, 2010-2011; Thulesius, 2006).

During the United States' Civil War, the Confederates took possession of the former Union vessel USS *Merrimack* (Thulesius, 2006). From this the rebels constructed an ironclad, re-named the CSS *Virginia*. Hearing of this, the Federal government of the Union decided that it might be wise to invest in its own ironclad gunship. This ultimately led to the construction of the USS *Monitor*. Less than two months after *Monitor*'s completion, it took part in its lone battle with the CSS *Virginia*. This clash ultimately ended in a stalemate, proving the durability of metal boat construction (Bryson, 2007-2008, 2009-2010; Renner, 2006-2007; 2010-2011; Thulesius, 2006).

It is noteworthy that there is no mention of the possible origins of these “Monitor” and “Merrimac” garage-names within the 1926 Sears *Honor Bilt Modern Homes* catalog. Thus, there is no obvious hard evidence (within the catalog) to back up my hypothesis as to the true context of these building-designations, thus making these thoughts only conjecture. If only one of the aforementioned names had been used for a garage model, I would assume no connection to these historic ships. The name “Monitor” could have theoretically been meant to allude to how the garage would “monitor” the safety of its owner’s car (or whatever else was stored inside) (Hunter, 2012, 43). “Merrimac” could have simply been seen as a pleasant-sounding name. However, the fact that both of these were used together, in the marketing of two comparable buildings (with debatable parallels in design to their respective ships), leads me to believe that their use is of no coincidence, and thus totally meant to construct associations between the buildings and their historical, nautical counterparts.

For one thing, the Sears “Monitor” and “Merrimac” are both proudly proclaimed to be “Sectional Steel Garages” (Sears, 1926, 126). Fireproof *steel* garages, as opposed to the other, wooden ones offered within the same catalog. As such, these products were meant to be differentiated from their wooden counterparts. And what better way to accomplish this than through a comparison with two, historically significant, iron-plated gun boats, some of the first of their kind?

Admittedly, the Sears garages were steel (rather than iron), but the metaphor certainly still stands on its own.

The design cues of both the Sears “Monitor” and “Merrimac” outbuildings also appear to share some characteristics with their namesakes. The USS *Monitor* had a cylindrical turret, meant to be rotated via steam-power, and its hull-shape was generally somewhat-rounder than that of the *Merrimack/Virginia* (Historylink 101; Thulesius, 2006; Wikipedia). These rounded features

seem to be alluded to in the curved roof shape of Sears' "Monitor" garage. This gently-rounded roof was said to be "very attractive", and functionally-stronger than many traditional metal roofs (Sears, 1926, 126). The CSS *Virginia* (the former USS *Merrimack*) had a more angular, boxy design (Historylink 101). A *Star Wars* fan might say that it looked kind of like a giant, floating "mouse droid" (*Star Wars*). Comparatively, Sears' "Merrimac" had a more traditional, gabled roof, perhaps more or less meant to reflect the ship's form (Historylink 101).

Also, one may notice that the USS *Merrimack* and the "Merrimac" garage are spelled differently (the latter without the "k"). This misspelling was actually common during the days contemporaneous to the actual ship, and likely accidentally adhered-to by Sears' marketing body (Sears, 1926, 126; Wikipedia). Thus, the spelling-difference doesn't disprove my theorized connection between the ship and the kit-building.

Upon my initial discovery of the existence of the "Monitor" and "Merrimac" garages, I had to wonder whether potential customers would have recognized these names, and thus the associations which they were meant to bring about. I figured that too much time would have passed between the Civil War and 1926, the year of the Sears catalog in which I discovered these garages (though they were likely still available in preceding and/or succeeding years) (Hunter, 2012). Obviously, many people who had directly witnessed the Civil War were still alive in 1865. The year 1926 was 61 years later. Someone 20 years of age in 1865 would have aged to 81 in 1926, a realistic age to survive past, even then. Of course, there were many others who were much younger than 20 in 1865 with firsthand knowledge of the war. Taking all of this into account, then, it is very likely that many contemporaries to the Civil War would have still been alive in 1926. The "Monitor" and "Merrimac" names, and what they stood for, could likely have

been explained to others by these survivors, had they come across them in marketing materials such as the Sears catalog.

Whether these ships' names were enough to convince people to buy products named after them remains to be seen. This is too bad, though the regional sales figures for these two similarly constructed and designed outbuildings named after important gunships on the opposite sides of the American Civil War would make for a very interesting research opportunity. Would the "Merrimac" have sold better than the "Monitor" in the South, and the "Monitor" more sales in the North? Or would Southerners still sore over the war have rejected both buildings, since "Merrimac" was a disambiguation of the original name of "their" CSS *Virginia* ironclad while it was still a Union vessel? Would enough potential buyers have even understood the meanings behind the garages' names to make a difference in their sales statistics? Would it have mattered to consumers even if they *did* know the meanings, anyway? Such questions will likely never be answered.

Yet another interesting question is what, exactly, the mentality at Sears' design department was in using the "Monitor" and "Merrimac" names. One has to wonder if it ever occurred to anyone that through these associations, they may have been reigniting the old conflicts and strife surrounding the Civil War, which even in 2016 are still triggers for some? Did the negative implications of their selling of a product named after a combat ship which served pro-slavery secessionists ever cross any marketing executives' minds?

One final note on Sears' kit garages. Upon initial inspection of the wooden Simplex Sectional garages in the 1926 catalog, I noticed that aspects of these buildings, particularly the vertical, wooden strips distributed among the horizontal siding at regular intervals, looked familiar. It wasn't until a bit later on that I realized why. Eventually, it occurred to me that in the 2013

videogame *Bioshock Infinite* (developed by Irrational Games), there is a scene in which a similar shed is present. Though not an exact replica of any particular Sears Simplex Sectional garage, it nonetheless has multiple characteristics that were present in some of the company's garage models [FIGURE 32]. The most notable of these is the aforementioned vertical planks appearing at regular intervals along the videogame building's walls. As discussed above, these unique vertical pieces are indicators largely unique to the "reinforced interlocking joint" system used in Sears' panelized buildings (Sears, 1926, 121). Furthermore, one of the *Bioshock* building's windows contains an awning similar to that featured on Sears' "Parkway" garage (Sears, 1926, 121, 123). Finally, this *Bioshock* shed has a unique, rounded roof reminiscent in shape to that of the "Monitor" garage. Taking all of these characteristics together, one might interpret this videogame building as perhaps a fictional hybridization of several of Sears' garage models.

Admittedly, the existence of all of these specific features here is probably a complete coincidence. I have no idea what the intentions of the developers at Irrational Games were in "building" their shed in this way, and it's not like it was a particularly important piece of the game, either. It was probably only placed within the game itself due to the need for a convenient door for the characters to walk through in one particular scene (in a landscape which was otherwise largely devoid of buildings). Thus, in all likelihood, the game's developers probably had no intention of portraying any representation of a Sears kit building. On top of this, the time period for the presence of any such catalog structure would not have been period-correct in the *Bioshock Infinite* canon, anyway. While most of the game takes place in 1912, the scene in question actually occurs around 1892, significantly predating the production of *any* Sears kit buildings, which were only sold between the years 1908 and 1940 (with a handful of 1941 exceptions) (*Bioshock Infinite*; Hunter, 2012). Regardless, it is possible that in researching older

style outbuilding architecture for the game, *Bioshock Infinite*'s developers came across some of the above-mentioned characteristics semi-inherent to Sears Simplex garages and, not knowing what some of these features were nor what they implied, added them to this particular in-game shed. In this way, Irrational Games still may have inadvertently added elements of the now-obscure Sears panelized kit architecture to *Bioshock Infinite*.

If it were somehow proven that the developers at Irrational were indeed influenced by Sears' kit garages when designing the *Bioshock* shed, this would be an example of "cultural borrowing" (Pipkin, 2015, 2016). This is a practice by which some tangible characteristic inherent to one culture is used for some (possibly different) purpose by another. One will find that this is very common in architecture. For example, many stylistic cues associated with Ancient Greek construction have been heavily used in both government and educational buildings in the United States. Perhaps this is most obvious in the massive white pillars of such structures, seeking to emulate the Doric, Corinthian, and (arguably most common of all), Ionic styles (Pipkin, 2015). There seems to be a general societal consensus that such Greek styles radiate an air of dignity, authority, power, and/or intelligence. Similarly, Irrational Games' theoretical borrowing of design cues from Sears' panelized garages to add an early twentieth-century atmosphere to *Bioshock Infinite* (or even simply because they just liked the way they looked), would fall under the "cultural borrowing" category. Also, if George Lucas deliberately set out to make his mouse droids look like the CSS *Virginia*, this would also qualify as cultural borrowing, though the chances of that having been the case are far less likely than the former.



## **The End of Kit House-Manufacture?**

By this point, one should hope that sufficient information has been conveyed about the products sold by, and the histories of, catalog home companies. It certainly seems as though these firms sold decent products based on sound, efficient methods... so why aren't they still around today? (Aladdin, 1920; Connor, 2016; Ebong, 2005; Hunter, 2012; Sears, 1926; *This Old House* 35.17, 35.18)? Why have all eight of the national (or nearly-national) scale manufacturers ceased to produce these innovative, practical abodes? One would think that the ideas behind them would still work nearly as well, if not better, in the present day.

The truth is, one major factor to blame for “killing the kit house” was the same general tragedy which indirectly led to my grandfather desperately eating an insect-covered piece of cake off the ground as a child: The Great Depression (R. Squires). Naturally, during this economic crisis, fewer people set out to build new homes, very bad news for kit house manufacturers (Hunter, 2012). This turn of events was made all the more bitter by the ironic fact that Montgomery Ward and Sears both claimed to have sold their greatest number of houses per year in 1929, the same year as the infamous stock market crash. Compounding these organizations' fiscal problems was the fact that many of them had given out ridiculous numbers of mortgages to their house-buyers (Connor, 2016; Hunter, 2012). Naturally during the Depression, many of these customers could no longer pay their lenders back, sending both parties into financial dire straits. This forced companies to significantly narrow their kit offerings, and tighten advertising budgets (Sears actually halved its catalog page sizes in its autumn of 1933 catalog, as well as the one corresponding to the spring of 1934). The original housing departments of Montgomery Ward and Sears would be permanently terminated by the Depression, though Sears would attempt to

break its way back into the market through different divisions twice more in coming years (Hunter, 2012).

During the Depression, and then World War II (when housing demand was still low), some kit house companies were able to barely stay in business by obtaining government contracts for the construction of housing for the Civilian Conservation Corps, military barracks, and/or even simple crates and pallets (Hunter, 2012). This at least partially backs up the downward trend in quality of post-World War II civilian catalog homes, as asserted by Mike Connor, who claims that the companies involved all seem to have simultaneously started offering homes at the absolute least cost to themselves, thus severely sacrificing quality and architectural detail. Sears' first attempted revival of its place in the catalog home industry culminated in its offering of the bland, modular panel-based "Homart" brand. Homart buildings' "Minimal Traditional" appearances have been rightfully compared to institutional structures (Hunter, 2012, 53). Institutional structures... suspiciously similar to the World War II military barracks which Sears had churned out only a few years prior.

The downward spiral of general kit home quality is further exemplified in Gordon-Van Tine's "Master Plan" houses (Hunter, 2012, 50). However, this nameplate is a good contender as one of the most misleading of all time. While a potential customer may have been meant to see the grandiose "Master Plan" name as expressive of the "excellence" or "superiority" of the brand over the competition, in reality, it only referred to the fact that all houses in the series had the same, basic ("master") design, hidden by basic aesthetic variations. As such, Gordon-Van Tine's real "master plan" was one to decrease the costs of production burdened upon itself, at the sacrifice of design-variety (and likely overall quality, as well) (Lewis, 2015). Thus, instead of crafting the architecturally interesting, unique homes that they had been known for, Sears,

Gordon-Van Tine, and other such manufacturers began making low quality house kits devoid of character after and during the Depression, acts which would ultimately culminate in many of American society's negative associations with kit buildings (Connor, 2016; Hunter, 2012).

Soon after the war, another nontraditional, affordable housing method became widely available: mobile "trailer" homes (Ebong, 2005; Hornbeck, 2016; Hunter, 2012). The "trailer park", semi-permanent variety of these evolved from the truly mobile, "travel trailer"-type vehicle, though even the former can still be transported with relative ease. As such, trailers more or less became their own type of modular home, though despite their affordability and ease of installation and delivery, various negative associations have given them notoriety. Due to trailers' becoming a form of modular housing, the modular medium in general has unfortunately been attached to these same negative associations, which in turn has arguably tainted the perception of *any* prefabricated house-types (whether it be true kit, modular, etc.). This, combined with the previous fact that catalog home companies were already known for selling low-quality products by this point, seems to have unfairly sealed negative associations with them into the public's memory. This is the reason why I wanted to be so careful in comparing Sears kit homes to Winnebagos: I wanted to avoid any associations with the build quality or other negative characteristics of house trailers through them.

Another nail in the "kit coffin" (indeed, theoretically this would be an interesting idea which no manufacturer seems to have taken up by this point) was the way that "tract housing"-based suburbs began to be constructed (Ebong, 2005; Hunter, 2012; Pipkin, 2013; 2015). The owner of a large piece of property would subdivide it into small lots, put a nearly identical (if not outright identical), cheaply-built house on each one, and then sell each unit to a separate buyer, as in places like Levittown. Still other developments had specifications for what style of houses could

be erected, and even who the builder could be. Under both such situations, kit houses were rarely allowed to be constructed, resulting in their manufacturers, obviously, not making profits in such markets.

Rather poetically, the very last major American manufacturer of kit homes had also been the very first: Aladdin Company, which ceased operations in 1983. (Hunter, 2012). Ironically, the two runners-up for lasting the longest into the twentieth century were Lewis/Liberty Homes and Sterling Homes, the companies founded by the two sawmills formerly contracted by the Sovereign brothers to process the wood for early Aladdin homes. These went out of business in 1975 and 1974, respectively (Hunter, 2012).

### **And a Possible Resurgence?**

While the *widespread* use of the true kit home concept died off long ago, many of its principles remain more or less alive and well in the practices of modular home companies like Connor Homes, as well as other independent firms (Brown, 2015; Connor, 2016; Connor Homes; Ebong, 2005).

According to Ebong's *Kit Homes Modern*, there are three primary methods employed in the construction of today's versions of kit houses, though these can overlap with each other at times. These are "post-and-beam precut kits", "modular kit homes", and "panelized home kits" (Ebong, 2005, 148-150). It is important to note here that these classifications are confusing (and in some cases, possibly even incorrect), for several significant reasons (to be explained in conjunction with these variants, below). Furthermore, none of these classifications fit the definition of "true" kit-based housing, as established at the beginning of this thesis (Hunter, 2012).

Ebong's definition of "post and beam precut kits", sometimes referred by her as just "precut homes", naturally falls the closest to the original kit house concept, due to the fact that the structure's wooden components are provided in loose, appropriately-cut pieces. Where this idea deviates significantly from the original kits is Ebong's insistence that "Precut homes use post-and-beam construction methods, which structurally support expansive interior spaces, making airy, open, light-filled rooms" (Ebong, 2005, 150). This is completely contradictory to the fact that every true kit house ever produced by a major manufacturer has almost certainly either been balloon or platform framed, since post and beam construction would have been too expensive and impractical for use in this application (at least around the turn of the century). Furthermore, by definition, balloon and platform framed buildings utilize interior walls for structural support, largely negating the association of all precut homes with Ebong's insistence on "airy, open" spaces (McAlester and McAlester, 1996). None of this, of course, is meant to imply that post and beam based, precut kit homes are a complete impossibility, nor that they have never been built. However, one should understand that any theoretical statement implying that *all* precut kit homes are and have always been constructed in that style would be completely false.

The remaining two modern kit house subtypes defined by Ebong, in my own opinion, should really be consolidated into a single category. She defines "modular kit homes" as those in which significant portions (or even their entire, outer "shells") are prebuilt in a factory, shipped to the construction site, and attached in place, after which any finishing work can be completed. In comparison, under "panelized home kits", individual, structural panels (presumably after having been assembled in a factory) are attached to each other on the home building site, making up the building's shell (Ebong, 2005, 150). These can be provided as either simple frames with sheathing attached to their exteriors, or as pre-insulated units with finished interior-sides.

One may find it difficult to separate the above two subtypes from each other, given that they essentially cover the same territory, with “modular” construction generally being defined as any practice by which the main structure of a building is in part or completely assembled offsite, and then moved into its permanent location. So technically, Ebong’s definition of “panelized home kits” completely qualifies as, at the very least, a modular subtype, since panels are constructed in a facility before being bolted together at their final destination totally qualifies as a “modular” practice. One can only speculate as to why she split the modular and panelized construction types into two different categories. My best guess is that maybe she thought that the latter designation only applied to homes whose components consisted only of relatively small, regularly-sized panels, while the former dealt with larger, irregularly-shaped, prefabricated pieces. Of course, this is only conjecture.

These three (or two?) “modern” takes on, or combinations of takes on, the kit house concept are exemplified in *Kit Homes Modern*, though none seem to adhere at all to traditional architectural styles. Instead, they appear to lean heavily in the “Modern” or “Post-modern” schools of thought, a direction in which aficionados of traditional architecture (like myself) hate to see things go (Kunstler, 1996; Pipkin, 2013, 2015). The introduction even seems to berate kit-dwellings of such “antiquated” styles and execution: “The homes featured in this volume are definitely not your grandfather’s, or even your father’s, prefab kit homes. Dispel memories of Sears mail-order kit homes, quaint Quonset Huts, do-it-yourself log cabins, or multi-gabled precut timber homes. The houses featured in this volume represent a new and improved version of prefab convenience architecture, one rooted more in the optimism and stylistic clarity of 20<sup>th</sup>-century modern design updated to suit 21<sup>st</sup>-century sensibilities...” (Ebong, 2005, 8).

The publication's insistence on distancing itself from the original line of kit homes manufactured by Sears not only seems pretentious, but also foolish. While some might not have cared for such traditional architectural styles (though I would staunchly disagree with such an assertion), the actual *quality* of its Honor Bilt (and even its Standard Bilt) offerings was definitely nothing to look down upon. As already established, Sears' Honor Bilt homes appear to have been constructed even *better* than the general standards of 2016 (G. Squires; Sears, 1926). As such, any claims of the inferiority of Sears' original catalog houses are completely false.

Furthermore, one could argue that many of the kit homes showcased in Ebong's work are aesthetically just stereotypical examples of modernist architecture, generally paying no respect to architectural traditions, nor the implications behind them (Kunstler, 1996; Pipkin, 2013, 2015). Many of these homes reject the use of general verticality to "ground" them in relation to gravity, and are therefore instead entrenched in the horizontality rightfully dreaded by Kunstler, and/or don't conform to the idea of hidden diagonal "regulating lines" (Kunstler, 1996, 102).

Other models exemplified by Ebong seem just plain unpleasant, lazy, and/or impractical in design or features. The perfect example of this is the "Loftcube", a 387 square-foot, standalone apartment unit, meant to be placed on the flat roof of tall urban buildings (Ebong, 2005, 84). Its having been designed to make use of otherwise largely-ignored city space is about the only thing working in this kit's favor... Real estate is always a desired commodity in busy cities, and places where it can be more efficiently utilized should be taken advantage of (Ebong, 2005; Ferraro, 2013; Jacobs, 1961; Pipkin, 2013, 2015). The other good idea incorporated into this pseudo-apartment is the use of structural voids in its metal framework for practical wiring.

But the Loftcube seems to be a poor execution of a good idea, being a building which is a perfect example of what Kunstler would call a "houseburger", a horizontally-focused, ugly mess

[FIGURE 33] (Kunstler, 1996, 103; Pipkin, 2015). Furthermore, for its diminutive size, the unit is quite expensive, with its base model ranging from \$79,000 to \$87,000 in price. This cheaper version doesn't come with sliding multi-position wall panels, any plumbing whatsoever, furniture, or kitchen and bathroom fixtures, all of which are pictured in *Kit Homes Modern*, but are only available at extra cost.

Perhaps one of the worst parts of this kit is the fact that the bathroom floor is made of loose, "white-washed gravel" (Ebong, 2005, 88). The smooth stone pieces are apparently not in grout, nor held in place in some other way. A pile of gravel was literally dumped onto the sunken bathroom floor, then spread evenly to match the level of the other floor surfaces. Admittedly, this would probably feel good on bare feet, and be an easy thing to fix (by simply using tile instead!), but the whole idea of a loose stone floor in a house is one of the least practical architectural techniques that I have ever encountered. How does one keep a loose-stone floor sanitary? By removing and washing each and every rock, then cleaning the underlying surface, and then finally re-spreading the rocks, every week? Wouldn't the gravel get knocked "out of whack" every time someone walks on it? Couldn't a handicapped person potentially have a lot of trouble walking on loose stone?

Regardless of the Loftcube blunder, however, there are indeed a few good examples of modern kit architecture brought forward by Ebong. Perhaps the best concept displayed is that of the "Spacebox" [FIGURE 34-B] (Ebong, 2005, 34). These are portable cube-apartments, 193 feet-square, each of which is equipped with its own, fully-functioning bath and kitchen. Furthermore, Spaceboxes come totally preassembled, ready to be hooked into sewer, water, and power lines. Rows of these individual units can be stacked on top of one another, resulting in pseudo-



apartment complexes [FIGURE 34-A]. Presumably, these can potentially be detached and moved again with relative ease.

Admittedly, the Spaceboxes (and Spacebox-complexes themselves) are very ugly, architecturally. These abodes are completely devoid of character, being nothing more than colorful boxes on the outside. They have much the same pretentious, modernist feeling as the Loftcube, compounded by the fact that, when stacked into complexes, their homogeneity and lack of identity is made all the more obvious. Thus, from this standpoint, one can see how another might hate the Spaceboxes.

However, the *idea* behind the Spacebox has a lot of potential, in two completely different forms. Though the concept is currently being used for college dormitories in Holland, it was originally developed as a “temporary solution to housing shortages” (Ebong, 2005, 34). If these Spacebox systems, ugly as they are, could be rapidly constructed and then deployed in disaster zones where many people are suddenly stricken homeless (such as from earthquakes, tornados, etc.), many hardships could potentially be circumvented (while possibly saving lives). Under this scenario, the Spaceboxes would stay in place, sheltering disaster victims until they are able to re-establish permanent housing for themselves. The boxes’ ugliness wouldn’t matter in such situations, since they would only be in place temporarily, and those living within would just be happy to have a decent shelter. Once they are no longer needed in a particular area, these units could be separated once more and trucked to another place with a populace in need of temporary housing.

The general concept of truly instant, “plug-and-play” housing exemplified by the Spaceboxes could also be very desirable in many other situations. Theoretically, someone could develop a small house making use of these same move in-ready ideas *that is architecturally-pleasing*, due to its resemblance *to an actual house*. Prior to delivery of the product, the owner would have to

prepare a proper foundation, of course. Upon delivery, the instant-house would be attached to the foundation, and its utilities hooked up. Then the resident would just need to move in.

Under the above scenario, the building would be permanent, but the residents wouldn't necessarily be. Like the "Aladdin Hunters' Lodge" or even Sears' "Hunters' Cabin", this theoretical instant-house derived from the Spacebox concept could be used as a "settler's house", where the occupant could live while slowly building a bigger home and developing a farmstead, etc. (Aladdin, 1920, 116; G. Squires; Sears, 1926, 124). Once the larger home is completed, the initial prefabricated structure could be used as a shed, guest house, rental unit, etc. Whether it be a simple, yet functional emergency shelter, or a rapidly-constructed, yet permanent and attractive house, there is much to be said for being able to move into such a structure on the same day that it arrives on the worksite.

One concept with many similarities to my theoretical one derived from the Spacebox has come to be known as the "Katrina Cottage" (Brown, 2015). After the mass destruction brought about by Hurricane Katrina in 2005, a group of planners and other professionals in related fields were commissioned by Governor of Mississippi Haley Barbour to put plans together to rebuild the state's obliterated infrastructure and housing. Forty percent of Coastal Mississippi's housing units had been destroyed or otherwise damaged in the storm, resulting in a massive number of displaced residents (Brown, 2015).

Rather than simply issuing mass numbers of the now-infamous FEMA trailers to these victims, the group decided that some form of affordable, permanent housing made much more sense.

Whereas the trailers would only ever serve as temporary homes, a theoretical alternative could be built in such a way as to not only be a permanent structure, but also meet "storm zone engineering standards" while serving as a foundation to encourage healthy neighborhood

development going into the future (Brown, 2015). Furthermore, a significantly smaller proportion of money was projected to ultimately go to waste in such a permanent housing-based plan in comparison to one based on FEMA trailers. This is because of these mobile homes, which would end up costing millions of dollars overall, most would only be re-sold at a fraction of their original price, or even demolished, in the course of only a handful of years (Brown, 2015).

The Mississippi planners ultimately decided that their new alternative housing system would utilize modular strategies in order to minimize costs while ensuring a more-rapid completion of the final product. Katrina Cottages were the result of this line of thought [FIGURE 35] (Brown, 2015). The smaller units seem to have been largely assembled offsite, then trucked into place before the finishing-work was completed. Unlike Spaceboxes, Katrina Cottages were thus likely not instantly move-in ready the moment that they were put into place. Larger units, including multi-family dwellings, appear to have been designed in such a way that they could be preassembled into several large pieces, which would in turn be grafted together at their final destination. Because of this, Katrina Cottages were to be assembled quite efficiently.

Furthermore, because they were designed in such a way as to meet storm area stability standards, the Katrina Cottages were built as well as any other, traditionally constructed homes.

Based on the pictures which I have seen, Katrina Cottages indeed appear to have been very attractive little buildings, with plenty of tasteful architectural detail (Brown, 2015; Ferraro, 2013; Jacobs, 1961; Pipkin, 2013, 2015; Thyagarajan, 2014; Tiwari, 2015). Though at least two firms have attempted to build whole neighborhoods out of Katrina Cottages, this is probably not the best use for them, at least in their best-known form. The problem is that the same basic houses appearing over and over again results in a neighborhood which is far too uniform, more or less

cancelling out much of the character that the cottages' clever architecture tries so hard to establish. Of course, the buildings in these neighborhoods were of different colors and displaying varying porch-styles, but this does not hide the fact that they are all more or less the same basic design. If whole new neighborhoods were desired to replace those levelled by Katrina, then many other designs would need to be mixed in with the standard, single-unit Katrina Cottage. However, placing multiple, standard Katrina Cottages (with minor variations) in existing neighborhoods as infill housing to replace specific homes which had been destroyed by natural disasters or the like would work perfectly from an aesthetic standpoint, since these neighborhoods would (hopefully) already exhibit plenty of architectural variation (Ferraro, 2013; Jacobs, 1961; Pipkin, 2013, 2015; Thyagarajan, 2014; Tiwari, 2015). Whether such high-quality modular housing would actually be allowed to be constructed in such neighborhoods (due to zoning policies and unfair bias against modular housing and affordable housing in general), is another question and issue altogether, and is beyond the scope of this paper (Brown, 2015; Ferraro, 2013; Jacobs, 1961; Pipkin, 2013, 2015; Tiwari, 2015). With all of their characteristics taken together, then, one can argue that Katrina Cottages are more or less equivalent to Spaceboxes that are much better thought-out and executed, though not instantly-inhabitable.

Based on Ebong's three modern kit home categories, the houses and other buildings manufactured by Connor Homes would either fall into the "modular" or "panelized" designations, since the difference between these is pretty ambiguous (as discussed above). And regardless of their partially pre-constructed nature, the houses built by Connor Homes appear to be one of (if not *the* most) comparable to the "true", turn-of-the-century precut kit homes currently available (Connor, 2016; Connor Homes; *This Old House*, 2016, 35.17, 35.16). This being said, it is indeed ironic that these houses are constructed through the use of prefabricated

panels, thus having more in common with Sears' Simplex Sectional cottages and garages than its regular, Modern Homes kits.

However, the Connor panelizing system is notably more complex than that of the Simplex buildings. Whereas the Simplex wall panels were built from the start with the finished siding on the outer side, serving double-duty as both decoration and a major provider of structural rigidity, Connor's equivalent wall panels much more closely mimic traditional construction techniques (in design, not actual final assembly) (Connor, 2016; *This Old House*, 2016, 35.18). These panels have a traditional two-by-four "skeleton", over which plywood sheets are attached. These plywood-clad panels are then delivered to the building site, appropriately butted up against each other, and permanently fixed into place, without the pseudo-tongue and groove interlocking systems employed by Simplex. The exposed plywood from Connor's installed panels is soon covered with siding or interior wallboard (depending on the side from which one is viewing).

In my conversation with Connor, I found it interesting that he hadn't known that Sears had ever offered any kind of modular building systems (thus thinking that the company had only always purely stuck to precut kits). Thus, Connor-built modular homes were in no way inspired by the Simplex ones. He also found it ironic that Sears used the less efficient, stick-based kit system for its larger, "real" houses, while only utilizing its prefabricated panels on smaller buildings (namely, garages and cottages) (Connor, 2016; Sears, 1926). This doesn't make much sense to him, since panelized construction methods are thought to be the most beneficial when used for larger-sized buildings, while the fewest detriments to building from loose lumber pieces would have occurred when utilized for the construction of smaller structures. In other words, perhaps Sears should have done the exact opposite in this situation: used modular components for its "regular" houses, and its Ready Cut system for the smaller buildings.

Despite the largely negative stereotype that all manufactured homes are just “the step-child of good-quality building” [A direct quote from Mr. Connor] (as in, *not* high-quality construction), Connor has pointed out that many of the best aspects of the “true” kit homes are reflected in modular housing, when executed properly. For one thing, it accomplishes the task of gathering all necessary materials, as well as skilled labor, at a convenient, central location. Sears, Roebuck and Company, Aladdin Homes, and Connor Homes were/are all able to provide excellent, expertly cut and measured building-materials and components thanks to efficient factories filled with advanced, precision machinery and run by skilled workers. (Aladdin, 1920; Connor, 2016; Connor Homes; Sears, 1926; *This Old House*, 2016, 35.18).

Many mundane things work in favor of prefabricated housing, as well. For example, Connor Homes cuts its wood and assembles its panel components indoors (Connor, 2016; *This Old House*, 2016, 35.18). Not only is this generally more convenient and comfortable for the builders working on pieces, but this also prevents the weathering that would otherwise be experienced by structural frame components were they to be assembled outdoors in the traditional fashion, and as such at the mercy of nature’s elements until permanently encased within the finished building (Aladdin, 1920; Connor, 2016; Sears, 1926; *This Old House*, 2016, 35.18).

Yet another benefit of such factory-preconstruction is the increased safety of the builders themselves. By assembling the vertical wall panels horizontally and at “bench-level”, the workers are prevented from having to do many tasks while perched on ladders, such as in attaching top plates and other above-shoulder-height components. Bench-height component assembly also keeps craftsmen from having to bend over constantly to do normally lower-height tasks, thus saving them from potential long-term back injuries (Connor, 2016; Richie, 2016; *This Old House*, 2016, 35.18).

When taking the above facts together, Connor argues that “a controlled-environment building should always produce the better product” than traditional, stick-built homes (Connor, 2016). Of course, this is only the case when proper methods are used, unlike those which were utilized by many kit house companies post-World War II, effectively ruining the whole idea of the concept for decades, as previously discussed. But because of the perceived effectiveness and sensibility of the Connor Homes system, Connor predicts that eventually, the majority of houses built in the United States (and probably the world) “will be mostly factory-built” (Connor, 2016). This may seem like a historical repeat of the Sterling company’s 1916 assertion that if the time’s construction trends were to continue for five more years, 90% of the total number of new homes erected would start to be assembled from such kits (Hunter, 2012). While Sterling’s “90%” statement never even came close to fruition, one can deduce that Mike Connor’s “majority” counter-opinion is much more realistic (and not just because he didn’t put a ridiculously short time-table on when his prediction should occur, as Sterling did).

No, I really think that Connor Homes is onto something here. Sustainability, longevity of the product, classic architectural details, and attainability are all factors which figure prominently into the company’s mission. Society needs to recover from its anti-prefabricated house prejudices so they can see them for what they really can be. This includes affordable, *custom* designs. Connor Homes’ devotion to building truly classic, historically-inspired, beautiful homes meant to last forever is a perfect showcase for what a modern pseudo-kit house company could potentially do. This philosophy is all the more poignant when one acknowledges the fact that so many of today’s new homes are rather bland, ugly, and/or of subpar build-quality (Connor, 2016; Ferraro, 2013; G. Squires; Jacobs, 1961; Pipkin, 2013, 2015; Thyagarajan, 2014; Tiwari, 2015).

## **Conclusion:**

By no means has this project been a definitive, all-encompassing guide to the history and methodology behind mail-order kit housing. Still many topics and research strategies within this, and other related, interests have been left out for the sake of time and length. In fact, my initial plans for this project involved the tracking down of some kit houses locally, documenting them, and interviewing the homeowners. Perhaps I would have been able to track down individuals who could still recall the homes' construction, enabling me to learn further details. However, none of this really came to fruition, in part due to a rather stern and icy response from a homeowner when I knocked on his door and asked if I could interview him. This encounter ultimately scared me away from this strategy, though someone braver than myself could certainly pursue it in further research.

Furthermore, a whole other paper in itself could easily be devoted to kit barns, garages, and other outbuildings. As has already been established, many of these were available from various firms during the "golden era" of the kit construction industry, though literature on such outbuildings would probably be more difficult to find than that related to the kit homes. Also, in my experience, outbuildings tend to not be maintained as well as the homes that they are generally associated with. Probably in part because of this, these same sheds, barns, and garages (especially the smaller ones) are more often torn down than said houses. I have no statistical information to back this up, it is just something which I have noticed to apparently be the case. Because of this, it would be interesting to find the proportion of kit outbuildings having survived to the present in comparison to that of actual kit homes. Regardless, a general project aiming to thoroughly examine these buildings' characteristics would be of great interest to an enthusiast of



old architecture (like myself), especially if the researcher is able to track down and thoroughly document specimens still in existence in the present day.

The idea of manufacturing full houses as precut kits may well have started in 1906 when William Sovereign looked over a precut boat's blueprints, and decided that a similar process could be done for entire buildings. Or it could have been incepted even earlier, in the form of skillfully-crafted, disassembled post-and-girt house frames in the cargo holds of (ironically) other boats, English ships crossing the Atlantic on their way to the colonies in the New World. Either way, the dawn of the 20<sup>th</sup> century, thanks to technological developments and clever marketing strategies, saw how new techniques in the manufacture and assembly of buildings could permanently alter the landscapes of urban, suburban, and rural communities alike, until the kit-concept's downfall around the time of the Great Depression.

Given the tiny proportion of new homes being built from kits today in spite of the concept's many benefits, it is very possible that the whole idea of kit-based construction could continue to fade even further into obscurity. If the concept (whether it be consisting of "true" precuts, modular/panelized houses, or other ideas) ever has a chance to catch on to the point that it possesses approximately 3 percent of the market of new homes (as was the case around the time of the "golden age" of kit-building), it will likely be under traditional, or near-traditional, styles of architecture (Connor, 2016; Jacobs, 1961). I believe that many would shy away from the general pretentiousness, impracticality, and proportional cost of the "modern" kit homes generally espoused by Ebong. Instead, potential buyers would be more apt to gravitate towards timeless styles, such as those used by Connor Homes.

Furthermore, any resurgence in kit-based architecture within the confines of the United States would probably be dominated by modular/panelized construction techniques, given the many

benefits and proportional savings of such measures. However, I do believe that a market for true mail-order house kits also exists. Perhaps these two kit architecture subsets could exist side by side, with the latter being more affordable than the former (due to its need for much more assembly on the consumer's part). There is also something very attractive about the presumed ease of building a home in the traditional kit fashion, with the builder (whether it be the homeowner or a hired contractor) still being able to revel in victory upon the completion of this still-sizable task.

Regardless of the future building mediums (kit or otherwise), I believe that this quote from Mike Connor is an appropriate way to conclude:

“...the fact of the matter is, beautiful houses will get the stewardship that'll keep them going longer, so... in terms of just making them sustainable, you should make them beautiful. Houses need to be loved in order to be taken care of” (Connor, 2016).

I, for one, couldn't agree more.

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Athenaeum of Philadelphia, a research library with access to many historical documents. As such, a preface and publisher's note can be found ahead of the catalog reprint. The publisher's note, which is referenced a handful of times, is denoted in-text as "Athenaeum/Dover Publisher's Note, 1991".

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\*NOTE: The layout of this paper’s topics was heavily inspired by *Mail-Order Homes: Sears Homes and Other Kit Houses*, the 2012 book by Rebecca L. Hunter. Furthermore, its title was inspired by the chapter-name “The House that Came on the Train”, from the same book.